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A STUDY TO DETERMINE

THE MOST RESOURCE EFFICIENT METHOD  
TO PROVIDE INITIAL TREATMENT OF ADULT NONURGENT  
PATIENTS WHO ACCESS DARNALL ARMY COMMUNITY  
HOSPITAL VIA THE EMERGENCY ROOM

A Graduate Research Project

Submitted to the Faculty of

Baylor University

in Partial Fulfillment of the

Requirements for the Degree

of

Master of Health Care Administration

by

Major Julie M. Martin, MSC

September 1990

91-03803



## REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION N/A			1b. RESTRICTIVE MARKINGS N/A		
2a. SECURITY CLASSIFICATION AUTHORITY N/A			3. DISTRIBUTION / AVAILABILITY OF REPORT  Unclassified/Unlimited		
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE N/A			4. PERFORMING ORGANIZATION REPORT NUMBER(S)  79-89		
6a. NAME OF PERFORMING ORGANIZATION  DARNALL ARMY COMM HOSP			6b. OFFICE SYMBOL (if applicable) N/A		7a. NAME OF MONITORING ORGANIZATION US Army-Baylor University Graduate Program in Health Care Administration
6c. ADDRESS (City, State, and ZIP Code)  FORT HOOD, TX			7b. ADDRESS (City, State, and ZIP Code)  AHS San Antonio, TX 78234-6100		
8a. NAME OF FUNDING / SPONSORING ORGANIZATION  N/A		8b. OFFICE SYMBOL (if applicable) N/A		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER  N/A	
8c. ADDRESS (City, State, and ZIP Code)  N/A			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.		
11. TITLE (Include Security Classification) A STUDY TO DETERMINE THE MOST RESOURCE EFFICIENT METHOD TO PROVIDE INITIAL TREATMENT OF ADULT NONURGENT PATIENTS WHO ACCESS DARNALL ARMY COMMUNITY HOSPITAL VIA THE EMERGENCY ROOM.					
12. PERSONAL AUTHOR(S) MARTIN, JULIE M.					
13a. TYPE OF REPORT FINAL		13b. TIME COVERED FROM 7/86 TO 7/87		14. DATE OF REPORT (Year, Month, Day) 87/6	
15. PAGE COUNT XX 150					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
<p>The most resource efficient method of providing the initial evaluation and treatment of adult (13 years and older), nonurgent patients who access Darnall Army Community Hospital, Fort Hood, Texas through the emergency room was determined. An analysis was completed concerning the present method of managing the adult, nonurgent patient population followed by a review and analysis of other available hospital resources. Detailed data was obtained concerning the composition of the emergency room patient population by triage category, shift, and age over a 6 month period. The establishment of an evening shift Initial Care Clinic, staffed by a General Outpatient Clinic physician, was recommended to provide initial triage and limited treatment to all ambulatory patients accessing the hospital via the emergency room. Adult, nonurgent patients would then be referred, using a same day appointment, for treatment to the General Outpatient Clinic.</p>					
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION		
22a. NAME OF RESPONSIBLE INDIVIDUAL Julie M. Martin			22b. TELEPHONE (Include Area Code) 011-49-6221-390139		22c. OFFICE SYMBOL

DEPARTMENT OF THE ARMY  
HEADQUARTERS, 130TH STATION HOSPITAL  
APO NEW YORK 09102-3432

AEMHB-CSD

25 September 1990

MEMORANDUM FOR PROGRAM DIRECTOR, U. S. Army-Baylor University  
Graduate Program in Health Care Administration, ATTN: HSHA-IHC (CPT  
Wainright), Academy of Health Sciences, Fort Sam Houston, Texas  
78234-6100

SUBJECT: Request for One Year Extension

1. Request a one year extension to complete my Graduate Research Project and fulfill all the requirements for the degree of Master of Health Care Administration from Baylor University. I was a student in the 1985-1987 Baylor class.

2. My Graduate Research Project has been submitted for approval by the Residency Committee on 25 September 1990. My preceptor/primary reader is Commander William Lambert.

*Julie M. Martin*  
Julie M. Martin  
MAJ MS

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Unprocessed	<input type="checkbox"/>
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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 130TH STATION HOSPITAL  
APO NEW YORK 09102-3432

AEMHB-CSD

25 September 1990

MEMORANDUM FOR PROGRAM DIRECTOR, U. S. Army-Baylor University  
Graduate Program in Health Care Administration, ATTN: HSHA-IHC (CDR  
William Lambert), Academy of Health Sciences, Fort Sam Houston, Texas  
78234-6100

SUBJECT: Submission of Graduate Research Project

1. In accordance with the instructions contained in the Administrative Residency Manual, subject report is submitted for completion of the degree of Master of Healthcare Administration.
2. The Graduate Research Project is submitted with three copies and a Report Document Page, DD Form 1473. Also, a copy of my fourth quarter Residency Progress Report is enclosed, per your request.
3. Please send all correspondence to me at the following address: Box 268, 130th Station Hospital, APO New York, 09102. My office autovon number is 370-2688/2677/2648. My home telephone number is 011-49-6221-390139. Also, please advise me of the date of the graduation ceremony in December, I am making plans to attend.

*Julie H. Martin*  
Julie H. Martin  
MAJ, MS

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### Acknowledgments

I wish to thank the staff of Darnall Army Community Hospital for their welcome assistance in obtaining the research needed for this project. I owe Mary Kozlik a special thank you for her friendship and encouragement to complete the last requirement for my masters degree. Finally, I wish to thank my husband, Wayne, for his patience and support, without which, I could not have finished this research project.



Abstract

The most resource efficient method of providing the initial evaluation and treatment of adult (13 years and older), nonurgent patients who access Darnall Army Community Hospital, Fort Hood, Texas through the emergency room was determined. An analysis was completed concerning the present method of managing the adult, nonurgent patient population followed by a review and analysis of other available hospital resources. Detailed data was obtained concerning the composition of the emergency room patient population by triage category, shift, and age over a 6 month period. The establishment of an evening shift Initial Care Clinic, staffed by a General Outpatient Clinic physician, was recommended to provide initial triage and limited treatment to all ambulatory patients accessing the hospital via the emergency room. Adult, nonurgent patients would then be referred, using a same day appointment, for treatment to the General Outpatient Clinic.

## Chapter I. Introduction

### Problem Statement

To determine the most resource efficient method of providing the initial evaluation and treatment of adult (13 years and older), nonurgent patients who access Darnall Army Community Hospital (DACH), Fort Hood, Texas through the emergency room (ER).

### Objectives

1. A review of the current literature was conducted on the function and the utilization of Emergency Departments in both military and civilian hospitals which included the following factors: methods of triage, staffing levels, numbers and types of patients, criteria for classifying patients as nonurgent, and patient satisfaction with emergency services.
2. The size of DACH's supported beneficiary population showing a breakdown of active duty, family members of active duty, retirees and their family members, and civilian installation employees was determined.
3. The existing system of managing patients who access DACH through the emergency room was ascertained by:

- a. Reviewing applicable Standard Operating Procedures (SOP), regulations, and policies that describe, define, or direct the mission of the Department of Emergency Medicine (DEM);
  - b. Interviewing the Chief, Department of Emergency Medicine, all residents and interns, staff DEM physicians, the ER Non-commissioned Officer-in-Charge (NCOIC), the ER Head Nurse, the Chief, Department of Nursing (DON), the Deputy Commander for Clinical Services (DCCS), and the Chief of Primary Care at Health Services Command (HSC);
  - c. Investigating how patients are administratively processed into the emergency room;
  - d. Describing the method of triage and defining the patient triage categories of emergent, urgent, and nonurgent; and
  - e. Ascertaining the available ER staff, by shift, present to manage the patient workload.
4. Surrounding hospitals were surveyed to learn their method of patient triage in the ER.
  5. The monthly size of the adult nonurgent, urgent, and emergent male and female population initially evaluated in the emergency room, by shift, was determined.

6. The data collected was presented in graphical form by month, comparing the numbers of patients per triage category and the numbers of nonurgent patients to the total number of patients seen in the emergency room.
7. A review of the workload accounting system for ambulatory care clinics was accomplished to understand what is defined as a clinic visit, how the workload is collected, reported, and maintained.
8. The physical floor plan of the emergency room was reviewed to ascertain patient capacity and patient flow.
9. Other resources available to initially evaluate and treat adult, nonurgent patients within the hospital were determined.
10. Once specific resources were identified (General Outpatient Clinic, Women's Health Clinic, and Obstetrics and Gynecology Clinic), the volume of adult, nonurgent patients already being treated in these areas, the staff available, and the current mission was revealed.
11. The Chief, General Outpatient Clinic (GOC) and the Chief, Department of Obstetrics and Gynecology (OB/GYN) were interviewed.
12. A review of the documentation concerning the patient appointment system (PAS) to understand how the system operates,

how long adult, nonurgent patients must wait for an appointment in the Obstetrics and Gynecology clinic and Women's Health clinic (WHC), and how many appointments are available in each applicable clinic was completed.

13. The PAS supervisor was interviewed.

14. A review of documentation about the Emergency Medicine Residency Training Program was completed to ascertain the impact of the program upon the mission of the DEM.

15. Patient care provider productivity in the GOC, OB/GYN clinic, and WHC was determined by reviewing work schedules.

16. The number of gynecology patients being initially evaluated and treated in the GOC was revealed.

17. Alternatives to the the present system of managing nonurgent adult patients were developed.

18. These alternatives were compared and contrasted based upon the most efficient use of hospital resources.

19. A preferred method to manage these patients was presented.

20. An implementation plan was designed to explain how the recommended method of managing adult nonurgent patients could be

executed.

### Research Methodology

1. The literature review will consist of obtaining reference citations from MEDLINE searches, past applicable graduate research projects, the National Technical Information Service, and the National Library of Medicine's Interactive Retrieval service. Searches will focus on *hospital-based emergency services, hospital ambulatory care departments, access to care through emergency rooms, patient satisfaction with emergency services, emergency room/department staffing, quality assurance in the emergency room/department, triage systems, and emergency services staff training*. Emphasis will be placed upon retrieving military-specific references.
2. DACH's beneficiary population supported will be determined from the Directorate of Resource Management (DRM), III Corps, Fort Hood, who publish quarterly facts about Fort Hood. Population data is compiled by the DRM from the following sources: III Corps Adjutant General and the Installation Housing office.

<u>CATEGORY</u>	<u>SOURCE</u>
active duty (AD) strength	III Corps Adjutant General
family members of active duty	Installation Housing Office on post--precise numbers off post--*AD x 2.1
retirees/family members/survivors	III Corps Adjutant General (retirement services) Ft. Benjamin Harrison Finance Center master roster of retirees in 175 supported counties *retirees x 2.5
construction contractors, service contractors, PX employees, Non- appropriated fund employees, concession employees, DA civilians, band and school employees	Specific organization listed

3. In order to ascertain the existing system of managing patients who access DACH through the emergency room, the following documents will be reviewed to determine the impact on the DEM's mission and the constraints under which the department must operate:

- a. Department of the Army (DA PAM) 550-557, Staffing Guide for U. S. Army Medical Department Activities.
- b. Organization and Functions Policy, HSC Reg 10-1 and Medical Department Activity (MEDDAC) supplement 1 to HSC Reg 10-1.

c. Department of Defense (DoD) Directive No. 6000.10, which currently has no Department of the Army implementing guidance, but this document was used by the Government Accounting Office to ascertain compliance by our facility.

d. HSC Reg 40-6, Mission Assignment List.

e. HSC Reg 40-5, Ambulatory Patient Care.

f. HSC PAM 40-7-16, Hospital-based Emergency Medical Services.

g. HSC PAM 40-7-18, Ambulatory Patient Care: Prehospital Emergency Care and Transportation.

h. Manpower Survey Report-Schedule X for the last survey for DEM (Jan, 1986).

i. DEM SOP's which describe administration/clinical procedures (73 documents).

j. Joint Commission for the Accreditation of Hospitals (JCAH) standards, 1987.

4. Confidential interviews will be conducted with all residents, interns, and staff physicians using the list of questions at Appendix

A. An interview with the Chief, DEM will consist of the questions at



Appendix A. An interview will be scheduled with the DCCS discussing the questions at Appendix A. The Chief, DON will be interviewed concerning the topics at Appendix A. The ER Head Nurse and the ER NCOIC *will be interviewed using the questions listed at Appendix A.* The Chief of Primary Care at HSC will be interviewed concerning DoD Directive No. 6000.10 to determine what impact this guidance will have on the Army.

5. A review of the documentation used to log in emergency patients will be conducted to describe how patients are administratively processed into the emergency room. Emphasis will be placed upon how efficient the process is with regard to manual vs. automated processing. The following forms will be analyzed:

- a. Daily Patient Log Sheet, HSC Form 415a-R, 15 Oct 84, Medical Summary Report User's Manual.

- b. Emergency Care and Treatment, SF 558, June 1982.

6. The existing system of triage will be described based upon the interviews outlined above and the following applicable regulations:

- a. HSC PAM 40-7-18, Ambulatory Patient Care: Prehospital Emergency Care and Transportation.

b. HSC PAM 40-7-16, Hospital-based Emergency Medical Services.

c. HSC Reg 40-5, Ambulatory Patient Care.

d. HSC PAM 40-7-19, Ambulatory Patient Care:

Algorithm-Directed Triage for the Emergency Room.

The patient triage categories will be adopted from the reverse side of the SF 558, Emergency Care and Treatment.

7. A call to surrounding civilian hospitals, Army military hospitals with an Emergency Medicine Residency Training Program, and Army military hospitals of a comparable bed size will be made to determine their method of patient triage in the ER.

8. Staffing levels will be determined by reviewing: (1) the work schedules of staff physicians, residents, and interns; (2) the Table of Distribution and Allowances (TDA) manning document; (3) the available manpower as documented on the Uniformed Staffing Methodology Manpower Availability Report; and (4) HSC guidance concerning the number staff required to operate the Emergency Medicine Residency Training Program.

9. The monthly size of the adult nonurgent male and female

population initially evaluated in the emergency room, by shift, will be determined by compiling data from the SF 558 for a 6 month period, July 86-December 86. An example of an SF 558 is attached at Appendix B.

10. Data will be graphically presented using pie and bar charts, comparing numbers of patients per triage category and numbers of nonurgent patients to total number of patients. The bar charts will be organized to illustrate the difference in the volume of patients by shift: days, evenings, and nights.

11. Using the Manpower Summary Report User's Manual, I will be able to understand what is defined as a clinic visit, how the patient workload is collected, reported, and maintained. The Triservice Patient Appointment System (TRIPAS) is an automated system which generates workload data per work center, specifically designating the number of clinic visits per health care provider on any given day. This information is retrievable.

12. The physical layout of the emergency room will be analyzed by conducting an on-site visit, reviewing hospital floor plans, and completing interviews with staff working in the emergency room.

13. By interviewing the PAS supervisor, I will be able to determine what resources are available within the hospital to initially evaluate and treat nonurgent adult patients. Since patient access to medical treatment is by appointment only, except the emergency room, she will be able to provide a list of resource clinics.

14. Specific hospital resources available for the treatment of adult nonurgent patients include the General Outpatient Clinic (GOC), the Women's Health Clinic (WHC), and the Obstetrics and Gynecology Clinic (OB/GYN).

a. The volume of adult nonurgent patients in the above clinics will be determined by requesting a computer printout from the Tri-service Patient Appointment System (TRIPAS) system of all appointments from July-December 1986. The TRIPAS system is designed to print monthly statistical reports of outpatient visits by patient category for each clinic. The report lists total number of visits for the month per each clinic and per each health care provider.

b. To determine the staff available in each clinic, during the same six month period, the Uniform Chart of Accounts (UCA) Personnel Utilization System Summary Report will be analyzed. This

is a monthly report by work center or clinic that documents hours worked by category of personnel, e. g., provider, ancillary staff, etc. Its completion is governed by DoD 6010.13-M Medical Expense and Performance Reporting System (MEPRS).

c. The current mission of each clinic will be extracted from HSC Reg 10-1, MEDDAC Supplement 1 to HSC Reg 10-1, DA PAM 570-557, HSC Reg 40-5, and Schedule X's for the Manpower Survey Report completed in January 1986.

15. Interviews will then be conducted with the Chiefs of the GOC and the OB/GYN Clinic using the information obtained from the volume of nonurgent patients, their missions, and documentation of available staffing. A list of questions is contained in Appendix A. The Chief, Department of OB/GYN is responsible for both the OB/GYN clinic and the WHC.

16. A review of the following documents will provide an understanding of the PAS:

- a. HSC Reg 40-5, Ambulatory Patient Care.
- b. HSC Reg 40-7-1, Patient Appointment System.
- c. MEDDAC Reg 40-2, Operation of the Patient Appointment

System.

The monthly Clinic Appointment Backlog report, published by PAS, will be reviewed to determine appointment backlogs for the OB/GYN clinic and the WHC. The GOC currently provides only same day appointments, and consequently a clinic backlog or waiting list is not maintained. Available appointments in each clinic are monitored by PAS based upon input from the DCCS and the Chiefs of the clinic or department. The clinic or department Chiefs provide PAS with patient care provider work schedules approximately 4 weeks in advance. The number of these available appointments per clinic will be noted for the same six month time period.

17. The PAS supervisor will be interviewed using the list of questions at Appendix A.

18. A review of the guidelines from the Accreditation Council for Graduate Medical Research, Residency Review Committee for Emergency Medicine, will demonstrate specific requirements needed to maintain the residency training program.

19. Health care provider productivity, from July-December 1986, in the GOC and the OB/GYN clinic will be ascertained based upon input

form the clinic/department chief during the interview, the TRIPAS monthly report of outpatient visits, and the monthly UCA-Personnel Utilization System Summary report. Productivity for each clinic must be separately determined because of the different types of patients treated.

20. The volume of OB/GYN patients treated in the GOC, from July-December 1986, will be deduced based on the gynecology room log sheets from February through July 1987 (6 months). Accurate gynecology workload was not maintained prior to February 1987. Only appointments that require a pelvic, breast, or rectal examination will be counted, because examinations of this type require a specially equipped treatment room and a chaperone. The intent is to determine the volume of OB/GYN patients that may be shifted from the GOC to either the OB/GYN clinic or the WHC.

21. A diagram of the present system of managing adult, nonurgent patients and alternative ways to manage the same patient population will be designed. Alternatives for consideration:

- a. Maintain the present patient management system.
- b. Establish an evening shift GOC walk-in clinic.

- c. Establish an evening shift GOC walk-in clinic and shift

OB/GYN patients to the OB/GYN clinic and the WHC.

- d. Establish an evening shift Initial Care Clinic (ICC) in the DEM to triage patients before referral to the ER or the GOC.

22. These alternatives were compared based upon what system will provide the most efficient use of resources while still maintaining quality medical care using the following criteria:

- a. Follows JCAH guidelines for the provision of patient care.
- b. Maintains the Emergency Medicine Residency Training

Program.

- c. Follows Department of Defense and HSC guidelines for the provision of patient care.

- d. Treats the largest number of adult nonurgent patients.

- e. Follows the MEDDAC Commander's decision on the March

1987 DEM Management Study.

23. Based upon the above criteria, a recommendation was made on the preferred method of managing adult nonurgent patients and a proposed suggested implementation plan presented.



Criteria

1. Joint Commission on Accreditation of Hospitals, Accreditation Manual for Hospitals, 1987.
2. Joint Commission on Accreditation of Hospitals, Ambulatory Health Care Standards Manual, 1986.
3. American College of Emergency Physicians (ACEP): Guidelines for Emergency Care.
4. Accreditation Council for Graduate Medical Research: The Residency Review Committee for Emergency Medicine.
5. DoD Directive No. 6000.10, Emergency Medical Services, 18 Sep 86.
6. DA PAM 570-557, Staffing Guide for US Army Medical Department Activities, Jun 84.
7. HSC Reg 10-1, Organization and Functions Policy, 31 Mar 86.
8. MEDDAC Supplement 1 to HSC Reg 10-1, Organization and Functions Policy, 9 Dec 85.
9. HSC Reg 40-5, Ambulatory Patient Care, 2 Sep 85.
10. HSC Reg 40-6, Mission Assignment List, 21 Aug 84.
11. HSC PAM 40-7-1, Patient Appointment System, 9 Jun 86.

12. HSC PAM 40-7-16, Hospital-based Emergency Medical Services, 10 Feb 87.
13. HSC PAM 40-7-18, Ambulatory Patient Care: Prehospital Emergency Care and Transportation, April 87.
14. HSC PAM 40-7-19, Ambulatory Patient Care: Algorithm-Directed Triage for the Emergency Room, Dec 85.
15. MEDDAC Reg 40-2, Operation of the Patient Appointment System, 20 Mar 85.
16. DoD 6010.13-M, Medical Expense and Performance Reporting System for Fixed Treatment Facilities (MEPRS), Jan 36.
17. SF 558, Emergency Care and Treatment, definitions of triage categories, June 1982.
18. Clinic/Department Chief patient care provider productivity criteria.
19. MEDDAC Commander's decision on the Department of Emergency Medicine Management Study, Mar 87.

#### Assumptions

1. It is assumed that all personnel of Darnall Army Community Hospital, i. e., physicians, physician-assistants, nurses, medical

technicians, etc., are fully qualified to render necessary health care. Furthermore, each nonurgent patient entering the hospital for initial evaluation and treatment now receives and will continue to receive adequate medical attention under any proposal system modification.

2. It is assumed that management policies regarding patients eligible for treatment in our facility will remain constant over time, e. g., military family members and retired personnel will remain eligible for health care services.

3. It is assumed that the time period during which the data is collected reflects normative conditions and that no situational conditions existed to produce biased data, e. g., an epidemic of influenza.

4. It is assumed that the supported population for the hospital will essentially remain stable, i. e., no significant troop unit gains or losses will occur, with a steadily increasing retiree/family member population.

5. *It is assumed that the Emergency Medicine Residency Training Program will continue to operate, training the same number of residents/interns each year.*

### Limitations

1. Data for this study will be collected from July-December 1986 (six months), the same time period used to adjust required staffing levels for interim manpower schedule X's.
2. This study will review initial evaluation and treatment for adult, nonurgent patients who access DACH, not those who are eligible for care and elect to pay for their own ambulatory care.
3. This study will analyze adult nonurgent patients only, rather than children, because the Chief, DEM feels that the Department of Pediatrics is doing an efficient job of evaluating and treating the greatest number of pediatric nonurgent patients possible. The greatest burden on the ER is the volume of adult nonurgent patients, according the Chief, DEM.

### Review of the Literature

The function of hospital emergency departments (ED) has evolved over the years from one of providing only emergency care to one of providing comprehensive medical care to the surrounding community. A physician aptly described this transformation:

Years before the idea of emergency medical services was conceived, the emergency room was viewed by patients with alarm and reservation as the last resource in a health crisis or accidental injury. Today, the emergency department is viewed by the community as a service responsibility of the hospital with a scope of care extending beyond the due emergency to include nonemergent care, initial resolution of social and behavioral problems, and comprehensive stabilization of all medical conditions. (Cross and Riggs, 1984, p. vii).

Contrary to the ED's traditional function as a facility for the treatment of urgent medical needs, substantial numbers of people now use the emergency room for the treatment of routine, nonurgent problems, e. g., problems that might more readily be treated in an ambulatory care setting, such as an outpatient clinic or private physician's office (Stratmann and Ullman, 1975). The increased use of the emergency medical services for nonurgent care reflects

changing patterns of medical care in this country, changes in the functions of the emergency department rather than an increase in population or accidental injuries (Canizaro, 1971). With the recognition of emergency medicine as a specialty, a more sophisticated level of medical care is now available in a centralized location--the emergency department, now a vital hospital and community resource. The influx of nonurgent patients has strained the resource capabilities of most hospitals, hampering care to urgent patients (Canizaro, 1971). Nonurgent patients are paying for a level of medical care that is not needed when a less costly, more appropriate level of medical care is available in the ambulatory care setting.

The traditional role of Army ED's is also being challenged by the large numbers of non-emergency patients, who consume the attention of dwindling manpower resources; this situation has the potential to create a mass casualty situation when the patient workload overwhelms the available resources (Salander, Averbush, and Wilson, 1983).

The hospital emergency department is also a component of the

Emergency Medical Services System enacted with Public Law 93-154, the Emergency Medical Services System Act. The law defines the role of the ED in the following way:

provides for the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery, in an appropriate geographical area, of health care services under emergency conditions (occurring either as a result of the patient's condition or of natural disasters or similar condition), which are administered by a public or not-for-profit, private entity that has the authority and the resources to provide effective administration of the system (Cross and Riggs, 1984, p.4).

The emergency department's role in providing health care may be viewed from three perspectives: the patient, the physician, and the hospital. A patient recognizes the ED as a source of emergency medical services (EMS), as a gateway to other health services offered by hospitals, as a source of critical care and trauma services, and as a substitute for private primary care physicians (Cross and Riggs, 1984). Emergency medicine physicians view the ED as a major

practice site; private physicians view the ED as an after-hours office and a source of patient referrals (Cross and Riggs, 1984). The hospital administrator depends upon the ED for admissions, primary care services, trauma and critical care services to the community, and as a coordinator of other medical services in the community, e. g., disaster planning (Cross and Riggs, 1984).

Torrens and Yedvab (1970) lists three major roles of emergency rooms: (1) trauma treatment centers, (2) physician-substitutes when a private practitioner or outpatient clinic are not available, and (3) "family physician" to the urban poor. These roles are not mutually exclusive and may be present to a certain degree in all emergency rooms.

There are several types of emergency service programs, classified into four categories according to the degree of control the individual hospital exercises over the program: (1) hospital-sponsored in which the program is governed, financed, and managed by the hospital, (2) hospital-associated in which the program is governed and managed by the hospital but financed through a contractual arrangement of shared expenses and revenues, (3)



hospital-as-landlord in which the physical facility is owned by the hospital but emergency services rendered are not governed, managed, or financed by the hospital, and (4) hospital-independent in which the program is not governed, managed, or financed by the hospital (Burns and Ferber, 1984). Emergency services may also be classified by location as either hospital-based, freestanding, or satellite (Altman, 1983).

Emergency departments must adapt to their dynamic environments in order to provide the necessary medical care needed in their surrounding communities. Future planning of the function of today's emergency rooms should incorporate the role the facility is actually fulfilling in its community presently and then adapt to the changing needs of its patient population (Torrens and Yedvab, 1970). A primary obstacle to the improvement of emergency services is beyond the hospital walls and rests with the community. The establishment of a community system of medical care which provides personal, continuous, and comprehensive health service available to all classes and all groupings in the population is the desired solution (Weinerman, Ratner, Robbins, and Lavenhar, 1966).

Emergency room staff are understandably frustrated by the increasing volume of nonurgent patients inundating their departments, consuming valuable resources at the expense of more urgent patients. They often react to these patients with hostility, either overtly or covertly, which may not alter the care provided but may alter the manner in which it is provided (Wolcott, 1979). What is an emergency? It depends upon who you ask.

The American College of Emergency Physicians (ACEP) issued advisory emergency care guidelines in 1982 for the treatment of life- and limb-threatening conditions which have also been endorsed by the Emergency Department Nurses Association. They define emergency care as follows:

includes the immediate evaluation of and intervention  
in illnesses or injuries which are life- or limb-threatening.

(ACEP, 1982, p. 223).

According to ACEP Board of Directors, an appropriate ED visit is described below:

when an unforeseen condition of a pathophysiological  
or psychological nature develops which a prudent

lay person, possessing an average knowledge of health and medicine, would judge to require urgent and unscheduled medical attention most likely available, after consideration of possible alternatives, in a hospital emergency department (Buesching et al., 1985, p. 672).

This definition stresses patient perceptions in the decision-making process, not the physician's retrospective assessment using threat to life and limb criteria.

Society, physicians, and patients all agree on the role of the ED but disagree on the definition of an emergency. Hostility results when there exists an incomplete agreement on the existence of an emergency between the former three perspectives (Wolcott, 1979). Staff-patient-society hostility seems to be the largest single ED cause of iatrogenic disease, patient complaints, and political difficulties (Wolcott, 1979).

Many studies have been conducted on the urgency of need for emergency medical care. The ACEP sponsored a nationwide evaluation of patient and physician perceptions of the urgency of medical need (Guterman, Franaszek, and Murphy, 1985). Of the patients

interviewed, 60 percent believed they had an emergency problem; and 62 percent had a family physician. Emergency room residents underestimated the urgency of need 6.7 percent and the staff physicians 3.7 percent. However, when comparing the initial prospective and retrospective physician ratings of patient urgency, both ratings were in agreement 78 percent of the time. The likelihood of a patient requiring immediate emergency care or requiring admission positively correlated to increasing patient age. Factors leading to a discrepancy in physician ratings included the mode of patient transportation, the treatment location, and whether the patient had a personal physician.

Another study of 24 hospital ED's across the country of varying bed sizes by the ACEP in 1980 concluded that patients admitted to the ED needed care more urgently than was previously supposed (Gifford, Franaszek, and Gibson, 1980). Twelve percent of patients rated the urgency of their condition lower than did the physicians, and 25 percent of patients, rated by physicians as needing immediate attention did not recognize the need for urgent care at all.

Lumpkin, Glower, Fineberg, and Jekel (1986) studied patient

self-referral patterns to the appropriate level of emergency care based upon the severity of the illness. He found that 58.3 percent (at 6 p. m.) and 63.3 percent (at 3 a. m.) would activate the EMS for a suspected myocardial infarction. Patients often made choices that would have delayed definitive care.

Prior to 1982, a trend developed toward an increased use of the emergency department which cannot be explained by an overall increase in the incidence of emergencies; this trend may be explained by changes that have occurred in the healthcare system and society at large (Cross and Riggs, 1984). Changes that may elucidate the increased usage in the ED are as follows: (1) increased geographic mobility of the population which necessitates selection of a new family physician subsequent to the actual need for medical care; (2) a large urban concentration of low-income families, coupled with a shortage of physicians, who lack geographical and financial access to other sources of ambulatory care; (3) the increasing unavailability of physicians during the 60's and 70's especially on weekends, evenings, and holidays; (4) an oversupply of physicians in specialized practice along with a shortage of primary care physicians; (5) the increasing

availability in the 60's and 70's of ED's providing a more sophisticated, centralized source of medical care when compared to a private doctor's office; and (6) a lack of incentive for the patient to be cost-conscious when medical care in emergency rooms is covered by health insurance. Canizaro (1971) also agrees with the impact of these changes on ED utilization, and also offers the availability of 24 hour care and the presence of full-time physicians in the ED as additional reasons. Stratmann and Ullman (1975) proposes another reason why ED utilization has continued to increase. Patient utilization may be explained based upon the economic concept of utility; whereby patients will use the healthcare facility that they believe will offer them the greatest overall satisfaction after consideration of location, their perception of urgency, and availability of other sources of care. Estimates of nonurgent visits as a proportion of total ER visits range from one- to two-thirds, a reflection of consumer demand according to Stratmann and Ullman (1975).

Between 1969 and 1982, there has been a 113 percent increase in the number of visits to ED nationally, 38 million visits in 1969

compared to 81 million visits in 1982 (Cross and Riggs, 1984). Hospitals of 100-199 bed range experienced the largest number of ED visits in 1982 ( 21 percent of all visits) and represented 22.8 percent of all hospitals that year. With only 8.1 percent of all facilities nationally, hospitals of 500+ bed range received 19.5 percent of all ED visits in 1982 (Cross and Riggs, 1984). However, when examining the number of ED visits per hospital over the years, there has been a decline, due in part to the proliferation in the types of emergency and ambulatory care available, e. g., emergicenters, Health Maintenance Organiztion's (HMO), etc. (Cross and Riggs, 1984). In 1954, 9 million ED visits represented less than 2000 per hospital; 1979, 77 million ED visits about 13,000 per hospital; 1982, 81 million ED visits about 11,700 per hospital; and 1985, 80 million ED visits, about 11,600 visits per hospital (AHA, 1987). Community hospitals (short-term acute care) experienced 93.3 percent of all ED visits in 1982, representing 83.9 percent of all hospitals in the United States (Cross and Riggs, 1984). This figure remained about the same in 1985 (AHA, 1987). Canizaro (1971) compares changes in population, admissions, clinic visits, and ED visits from 1958 to 1969 with ED's presenting

the greatest increase--121.7 percent.

Ullman, Block, and Stratmann (1975) examined characteristics of the emergency room (ER) patient population at an urban community hospital and found the vast majority who used the ER did so infrequently (80 percent). The more frequent users (7.5 percent), making 3 or more visits to the ER, were mostly black, low-income, from inner-city areas, and 50 percent were Medicaid recipients. However, the majority of hospital admissions (53 percent) were from patients who made one visit to the ER per year.

Military hospitals have also realized an increasing utilization of their ER's. Lopez (1978) undertook a study of Martin Army Hospital at Fort Benning, Georgia to determine ER use, over a 3 year period (72-75). With a patient population of 70,000 and a bed size of 340, the hospital averaged 847/1,000 annual ER visits of which 4.8 percent were admitted. Surrounding civilian hospitals averaged 373/1,000, with 11.8 percent admitted, and an average of 5 other Army hospitals in the same area showed 501/1,000, with 4.4 percent admitted. The author used the admission rate to represent the degree of illness and concluded that Martin Army Hospital's ER was



overutilized in comparison to both civilian and military hospitals in the area.

The degree to which the hospital ED is used may also be contingent upon the availability of primary care physicians in the community. Hilditch (1980) undertook a study to assess the effects of establishing a community health center on selected aspects of the healthcare behavior of residents in a medically underserved community. He concluded that as a result of a five-fold increase in the number of family physicians to population ratio in a 3 year period after the opening of a community health center, a 40 percent decline in the number of ED visits; and in the perceived level of illness occurred. If a population's primary source of care is the hospital and not a community-based physician or health center, ED visits will be significant (Kelman and Lane, 1976).

Physicians of varying specialties in a suburban, rural county, were asked to identify factors contributing to increased visits to hospital ED's (Yolles, Kelman, Varma, Brook, and Pontel, 1981). They cited these factors: increased numbers of nonurgent visits, overuse of hospital ED's by the public, 24 hour availability of care, better

insurance coverage, and an increase in population.

Not only has ED utilization increased through the years, but the proportion of these visits classified as nonurgent has also climbed. Buesching et al. (1985) completed a study, using the ACEP 1982 guidelines, to determine appropriate and inappropriate ED use patterns in 3 community hospitals in August 1983. The overall average inappropriate rate was 10.8 percent out of 3,130 visits, a rate the author considered low. He believed the low rate could be explained by the increase in availability and number of primary care physicians in the community, the use of an average inappropriate rate (1.6 percent to 15.6 percent range), and the application of the ACEP guidelines which stress patient perceptions of urgency. Statistically significant ( $p < .05$ ) subgroups with the highest inappropriate use rate were as follows: Medicaid patients, children 5 years and younger, patients without a personal physician, unemployed patients, patients who were unable to contact their personal physicians, and patients visiting during regular office hours. The ability to identify a personal physician appeared to be a pervasive influence on inappropriate rates in every subgroup ( $p < .001$ ).

Weinerman, Ratner, Robbins, and Lavenhar (1966) also studied visits to the ED at Yale-New Haven Hospital finding a growing proportion of nonurgent visits. As a result, the hospital established a medical triage system.

Womack Army Hospital, Fort Bragg, North Carolina (Salander, Averbush, and Wilson, 1983) conducted a retrospective ER records review in 1977 to determine the profile of patients presenting for care. The profile demonstrated that approximately one-third of the workload was a bonafide emergency room visit by an adult, one-third of the workload could be classified as acute minor illness, and one-third of the workload was pediatric. A prospective analysis concluded that a significant number of patients could have been treated on a non-emergency basis in appropriate specialty clinics, and a substantial number of patients could have been treated by a minor illness team.

Darnall Army Community Hospital (DACH) has also experienced an increasing number of nonurgent patients presenting for treatment to the emergency room. A review of emergency room treatment records from July through December 1986 revealed a distribution of

patient triage categories as follows: 64 percent were classified as nonurgent, 19 percent as urgent, 1 percent as emergent, and 17 percent as unspecified by the triage physician.

The Chief, Department of Emergency Medicine has expressed concern over this continuing trend and fears that the Emergency Medicine Residency Training Program is in jeopardy of being suspended. He stated that accreditation for the program is dependent upon a 2-4 percent intensive care admission rate of all patients receiving treatment in the emergency room. With an increasing nonurgent patient population accessing the emergency room, the intensive care admission rate is diluted.

Patients who desire care at DACH must depend upon the availability of same day appointments in the General Outpatient Clinic which routinely are filled by 0930 in the morning. Once these appointments are filled, the only alternative for patients is to walk-in to the emergency room for evaluation and treatment. To compound the situation, it is hospital policy that no medical advice be rendered to patients who call the emergency room. Patients are instructed to come to the emergency room if they feel their medical

condition warrants such attention.

Nonurgent patients must frequently wait hours to be treated in the emergency room as priority of treatment will shift to patients with more urgent medical problems. Hostility between staff and patients results because nonurgent patients become understandably frustrated by a medical system of limited appointments with access via the emergency room their only alternative.

## Chapter II. Discussion

### Functions of a Military Emergency Room (ER)

The functions of a military ER, as defined in HSC PAM 40-7-16 (1987), consist of providing 24 hour evaluation, treatment, and/or appropriate referral of patients with life/limb threatening conditions with a concurrent function of maintaining the skills of the enlisted medics. The function of DACH's emergency room is also defined in DA PAM 550-557-55, Staffing Guide, as follows:

provides emergency medical care to acutely ill or injured persons, with disposition to the proper facility or service for followup care. Assists with the triage of nonemergency cases to the proper health care service (Staffing Guide, 1984, p. 2-31).

Department of Defense (DoD) policy states that all DoD beneficiaries will have access or referral to emergency medical services (EMS) for the treatment of patient care emergencies. ( DoD Directive No. 6000.10, 1986) The policy further states that all medical treatment facilities (MTFs) will have the capability to determine if a patient

care emergency exists and to initiate life and limb saving measures. Any eligible beneficiary with a stated patient care emergency arriving at a MTF emergency care area shall be evaluated, treated, and/or referred. It is the responsibility of a designated EMS health care provider or EMS nurse to determine which patients have a patient care emergency or to refer the patient to the appropriate area for care in the MTF. If referral to another facility is necessary, the patient shall be evaluated by a physician before transfer.

Each MTF shall be responsive to the health care needs of the population served, but the designated EMS level shall not exceed the personnel and equipment resources of the MTF. (DoD Directive No. 6000.10, 1986) According to HSC PAM 40-7-16, the services provided in the ER should only meet the needs of the general population rather than the needs of a few cases requiring specialized treatment; these patients should be referred elsewhere in the hospital. The responsibility for nonemergent patients is further explained in HSC PAM 40-7-16, 1987, p. 2:

Nonemergent patients utilizing the ER as a clinic become a hospital-wide responsibility. Triage must rapidly and

safely identify those patients who are at low risk for serious illness. When other clinics are open, it may be more appropriate for routine nonemergent patients to be treated in a location other than the ER. For example, since pediatric patients can represent 20-30 percent of the ER workload during duty hours and often over 50 percent on nights and weekends, increased pediatric clinic hours or rostering pediatricians to the ER could improve the efficiency and safety with which children are seen.

#### Population Supported by DACH

The patient population supported by Darnall Army Community Hospital (DACH) consists of the following categories of beneficiaries: active duty personnel, family members of active duty, retirees and their family members, and Fort Hood civilian employees. The average number of beneficiaries supported by DACH for calendar year 1986 was 189,892 people. Figure 1 shows a significant percentage (49 percent) of the supported population is comprised of retirees and their family members. The active duty population remains generally stable; however the retiree population and their family members



continues to increase, as illustrated in Figure 2.

### Current Patient Management System in DACH's Emergency Room

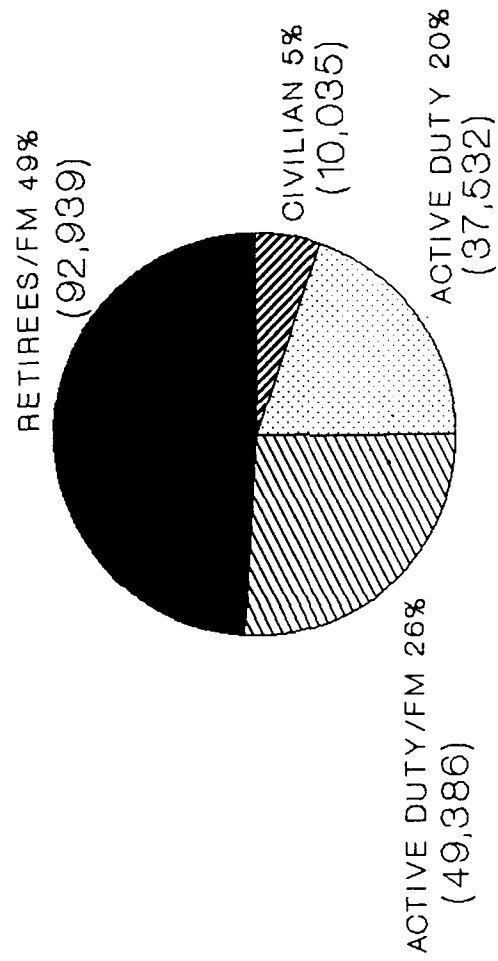
#### Organization of the Emergency Room

The Department of Emergency Medicine is organized into various sections and services, as described in MEDDAC Supplement I to HSC Regulation 10-1, Organizations and Functions Manual (1985) (Appendix C-1). The Chief, Department of Emergency Medicine works directly for the Deputy Commander for Clinical Services (DCCS).

The Emergency Medicine Service provides for the emergency care, diagnosis, treatment and disposition of patients who present for care. This service also provides pre-hospital care to critically ill or injured patients and operates the Emergency Room and the Ambulance Service. Additionally, the DEM is responsible for managing and directing the Emergency Medicine Residency Training Program.

The MTF commander shall designate the level of emergency medical service (EMS) to be provided in accordance with the Joint Commission on Accreditation of Hospitals (JCAH). DACH'S ER is classified as Level II which is defined as follows:

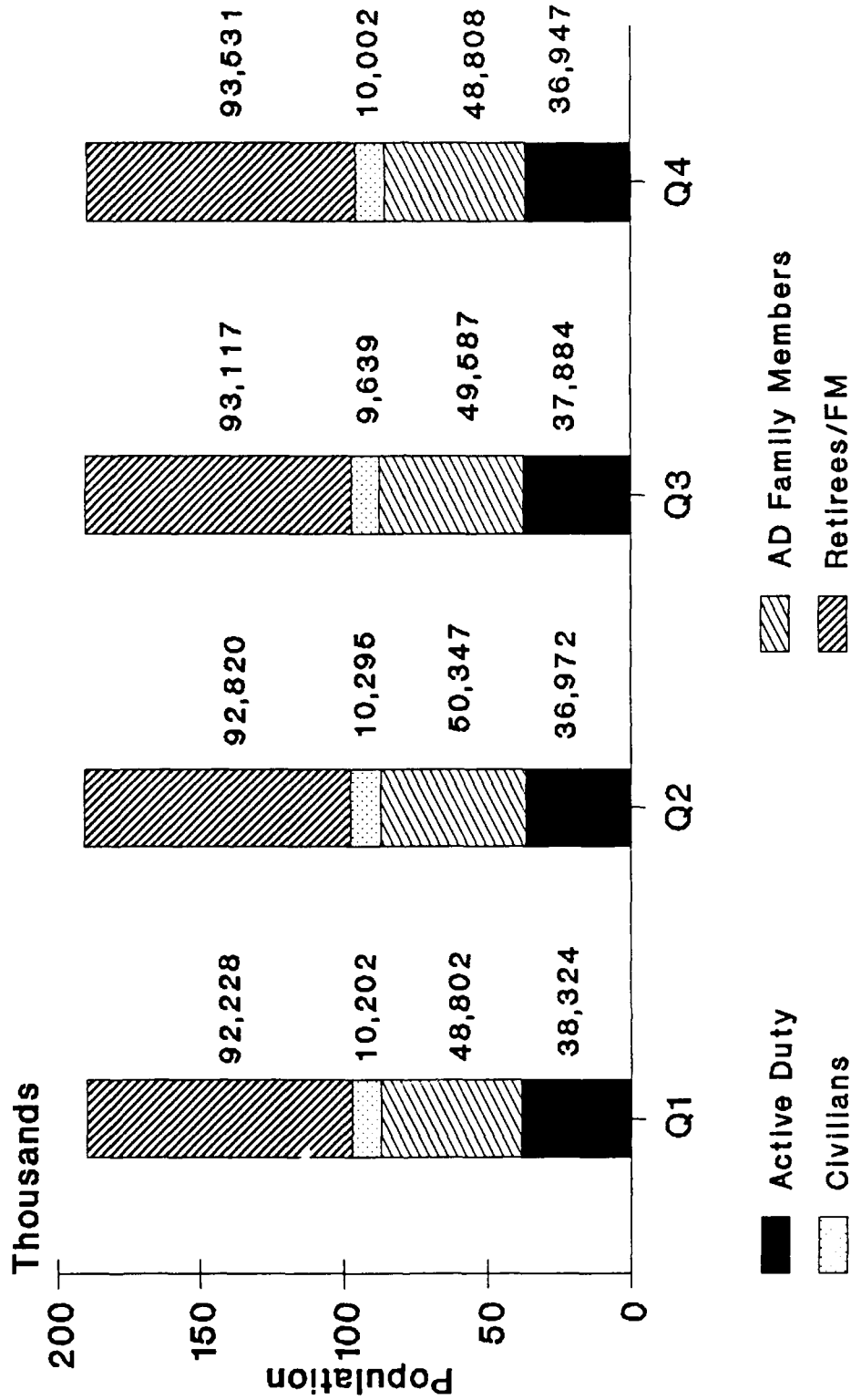
offers emergency care 24 hours a day, with at least one



**Total average population: 189,892 people**

**Figure 1. Darnall Army Community Hospital's average supported beneficiary population for calendar year 1986.**

Calendar Year 1986



**Figure 2.** Darnall Army Community Hospital population supported by beneficiary category.

physician experienced in emergency care on duty in the emergency care area, and with specialty consultation available within approximately 30 minutes by members of the medical staff or by senior-level residents. (JCAH, 1987)

The ER functions in three separate yet interrelated areas: triage, nonurgent, acute care, and urgent/emergent care. Staffing to execute its mission is described in the next section.

#### Emergency Room Staffing Levels

Existing staffing of the Emergency Room is described in the Manpower Survey Report-Schedule X, conducted in January 1986 (Appendix D). Patient care staffing of the ER is provided by four categories of personnel: physicians, nurses, paraprofessionals, and clerical aides/receptionists. The administrative functioning of the ER is performed by a physician (Director), a registered nurse (Head Nurse), and an Non-commissioned Officer (NCOIC). The Director also provides direct patient care and has training responsibilities.

Duties and responsibilities of physicians include: direct patient care, direct supervision of patient care rendered by residents, and administrative functions pertaining to the training programs.

Professional nurses are required to staff two separate and yet interrelated areas: nonurgent acute care and urgent/emergent care, as well as provide training to paraprofessional personnel and orientation for the residents. Paraprofessional staff provide assistance to nurses and physicians in patient care, transport of patients to ancillary services, and restocking of patient care areas. Clerical personnel greet the public, log in the patients, answer the phone, and process laboratory and radiology requests.

The Table of Distribution and Allowances (TDA) delineates the recognized personnel requirements and authorizations for each work center in the hospital. Table 1 depicts the personnel spaces for the DEM, along with assigned personnel. Actual staffing patterns for staff physicians and residents working in the ER are often erratic, not always allowing for consistent coverage.

Table 1

Department of Emergency Medicine Staffing Allocations, 86

Position	Req	Auth	Asgn
Chief, DEM	1	1	1
Director, Training Prog	1	1	1
Emergency Physician (62A-staff)	7	5	5*
Emergency Physician (student)	15	0	19
Medical/Surgical Nurse	6	5	6
Clinical Nurse	5	5	5
Emergency Treatment NCO	14	14	14
Medical Specialist	3	3	2
Vocational Nurse	4	4	3
Nursing Assistant	1	1	1
Medical Clerk	<u>6</u>	<u>6</u>	<u>6</u>
Total	61	43	61

Note. \* includes an internist; see Appendix E for definitions.

A staff physician's time is divided among four work categories: ER duty, 12 hours per shift, 4 days per week; administrative duty, 9 hours, 1 day per week; doctor's office duty, 10 hours, 5 days per week; and Wednesday ER coverage, 10 hours, 1 day per month. The typical work schedule is 10-12 hours shifts in the ER with 4 days off or 5-10 hour shifts with 2 days off. The average assigned number of ER staff physicians is 5.6 physicians over a 6 month period, not including the Chief, DEM or the Director of the Emergency Medicine Residency Training Program. These same physicians worked the equivalent of 6.4 man-months over a six month period. Additionally, 5 ER staff physicians were approved for moonlighting privileges.

There are 7 requirements and 5 authorizations in the ER for staff Emergency Physicians, 62A, with only 5 assigned. Included is one internist, 61F, with no requirement for such a position. In accordance with correspondence from the Commanding General, U. S. Army Health Services Command to the Office of the Surgeon General, dated 23 August 1982, hospitals with training programs will direct house staff to augment the 62A. The Residency Review Committee for

Emergency Medicine requires a teaching staff of 8 physicians in order to support the Emergency Medicine Residency Training Program.

(Accreditation Council for Graduate Medical Research, 1985)

However, the 8 physicians include the Chief, DEM and the Director, Emergency Medicine Residency Training Program. Presently the teaching staff consists of 7 physicians.

Residents and interns work 10 or 12 hour shifts with only a shift and/or a shift and day off when assigned to ER rotation. Postgraduate year (PGY) I and II's work more hours per month than PGY III students. Residents and interns doing in-hospital rotation outside of the ER are still required to work in the ER on the weekends. The number of assigned residents and interns has averaged 19 over a 6 month period, producing an equivalent of 23.43 man-months.

Ancillary staff typically work 8 hours per shift with a woman designated on each shift for obstetrics and gynecology patients. The ER ancillary staffing pattern is reflected at Table 2.



Table 2

Emergency Room Ancillary Staffing by Shift, 1986

	Days	Evenings	Nights
<u>Weekend/Holidays</u>			
Registered Nurses	2	2	1
Nursing Assistants	1	1	1
Medical Specialists*	4	5	4
Medical Clerks	1	2	1
<u>Weekdays</u>			
Registered Nurses	3	2.25	1.25
Nursing Assistants	1	1	1
ER NCOIC/Medical Specialists*	5	5	4
Medical Clerks	1	2	1

Note. \* Additional staff: 2 medical specialist students and 1 medical hold patient working day shift, weekdays.

### Workload Documentation

Patients are registered manually by ER receptionists on HSC Form 415a-R (Daily Patient Log Sheet). (Appendix B) This form is maintained for seven years. Data is compiled daily by the NCOIC and reported monthly on the MED 302 Report (Appendix B) to the Patient Administration Division for inclusion in the Medical Summary Report. Once a patient is logged in, the attending physician completes Standard Form 558 (Emergency Care and Treatment) which describes the patient triage category, the treatment provided and the disposition of the patient. (Appendix B) One copy is maintained in the DEM for 30 days, another copy is placed in the patient's treatment record, and a copy is given to the patient with followup instructions. All workload documentation is done manually.

### Triage System

Triage is defined as the initial assessment of patients to determine the urgency of medical care required, with the ultimate goal of placing the right patient at the appropriate level of care. Triage should be initiated within 5 minutes of when a patient first presents to the ER. (HSC PAM 40-7-16, 1987).

When ambulatory patients present to DACH's ER, they report to the receptionist at the front desk who determines eligibility for medical care and obtains general patient information.

Non-ambulatory patients are logged in by the individual accompanying the patient or by ER personnel in the ER treatment area. Patients are triaged by a physician within 30 minutes of logging in and are subsequently categorized into one of three categories based on the medical assessment of the triage physician. These categories are defined as follows (Appendix E):

**Emergent:** A condition which requires immediate medical attention and for which delay is harmful to the patient; such a disorder is acute and potentially threatens life or function.

**Urgent:** A condition which requires medical attention within a few hours or danger can ensue; such a disorder is acute but not necessarily severe.

**Nonurgent:** A condition which does not require the immediate resources of an emergency medical services system; such a disorder is minor or non-acute.

Based on the patient triage category, patients are seen

accordingly by residents/interns. PGY-2 residents are responsible for initially evaluating all patients who arrive by ambulance. Trauma patients are personally treated by the staff physician, and dependent upon the volume of patients, are assisted by residents/interns. Non-urgent patients may wait as long as 4 hours before treatment is provided. All patients, regardless of triage category, who come to the ER are treated.

Triage may be conducted by a physician, nurse, physician assistant, or enlisted medic. Table 3 provides a comparison of triage responsibilities at military hospitals and local civilian hospitals. It is important to note that Brooke Army Medical Center and Madigan Army Medical Center are the only other Army facilities, besides DACH, to operate an Emergency Medicine Residency Training Program.

All personnel performing triage functions should be appropriately trained and possess minimum educational requirements. Enlisted medics may only perform triage duties when they have been trained to use algorithm- directed triage as described in HSC PAM 40-7-19 (1985).

Table 3

Comparison of Triage Responsibilities between Military and Local  
Civilian Hospitals

Facility	Triage Performed By
Madigan Army Medical Center*	Nurse
Dwight David Eisenhower Army Medical Center	Nurse
Fitzsimmons Army Medical Center	Physician or Nurse
Brooke Army Medical Center*	Medic with algorithm
Fort Bragg MEDDAC	Physician or PA
Fort Benning MEDDAC	Physician
Fort Hood MEDDAC*	Physician
Metroplex Hospital	Nurse
King's Daughters Hospital	Nurse
Scott and White Hospital	Nurse

Note. \* Emergency Medicine Residency Training Programs

### Emergency Room Floor Plan

The ER is designed to separate nonurgent patients from urgent patients. Consequently, the floor plan divides the examination areas from the trauma/treatment area (Appendix F). The waiting room is small given the large volume of patients who access the ER, only about 100 square feet. Available seating in the waiting room can accommodate 40 patients and family members with overflow into the corridor or outside the building. During peak periods, staff frequently must ask that one family member accompany the patient with other family members referred to the main waiting area in the hospital.

The Department of Emergency Medicine also has space across the hall where administrative offices and a classroom are located. The only resolution to the waiting room space problem is expansion of the building on the west side (Appendix F).

### Emergency Room Population Treated

The ER workload has shown a gradual increase in the total clinic visits per year and the average number of clinic visits per month since 1982 (Figure 3 and Figure 4). The concern has been with the increasing numbers of nonurgent patients who use the emergency

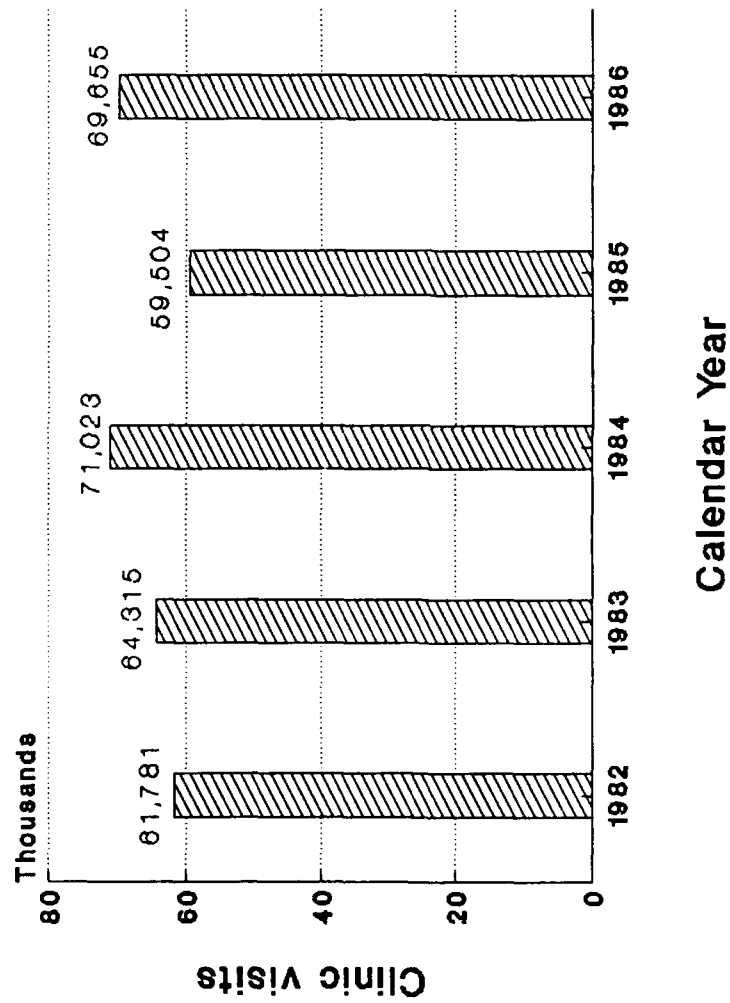
system.

A significant volume of nonurgent patients are presenting to the ER. Statistics were collected from July-December 1986, to include patient triage category, patient age, and the shift the patient presented for care. During this period, 64 percent of all patients were classified as nonurgent, 19 percent as urgent, 17 percent as unspecified, and 1 percent as emergent. (Figure 5) When comparing the triage categories of adult and pediatric patients, there is a similar percentage distribution. (Figure 6) Unspecified refers to a triage category not being specified by the triage physician. A cursory review of these unspecified ER visits showed patients were referred to other hospital ambulatory clinics such as the General Outpatient Clinic, the Pediatric Clinic, or the Troop Medical Clinic. Of the 64 percent nonurgent patients, 34 percent were injuries which occurred within 72 hours; and based upon information received from the Chief, DEM, it is a standard of practice to treat these patients in the ER rather than the GOC.

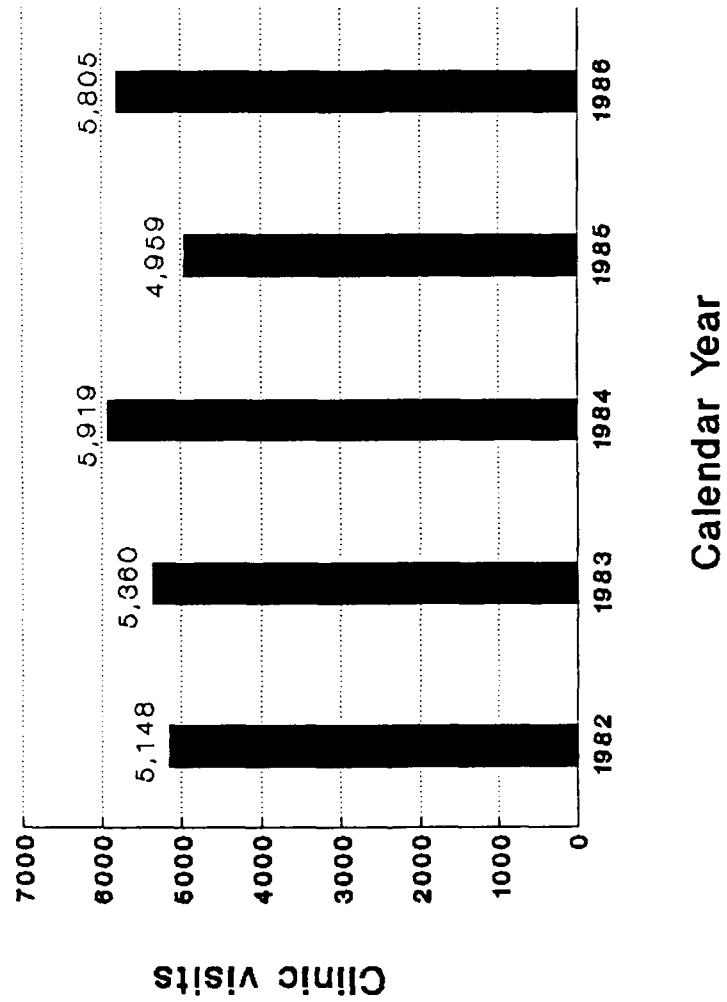
When comparing the monthly total of nonurgent visits to all other ER visits, one cannot say that the number of nonurgent patients

is increasing. The percentage of nonurgent visits to all other ER visits actually declined at the end of the year. (Table 4) After analyzing the ER visit data by shifts, it was discovered that the majority of nonurgent clinic visits were made during the evening shift, 1500-2300. (Figure 7) Further, there was a higher volume of adult, nonurgent patients seen during the evening shift, compared to pediatric, nonurgent patients. (Figure 8)

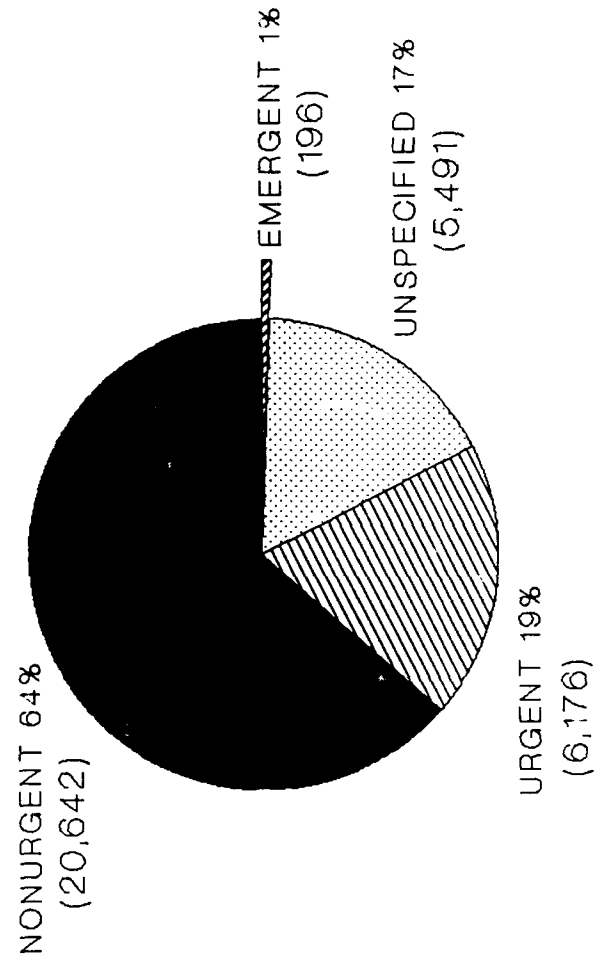




**Figure 3.** Total number of emergency room, clinic visits per year, 1982-1986.



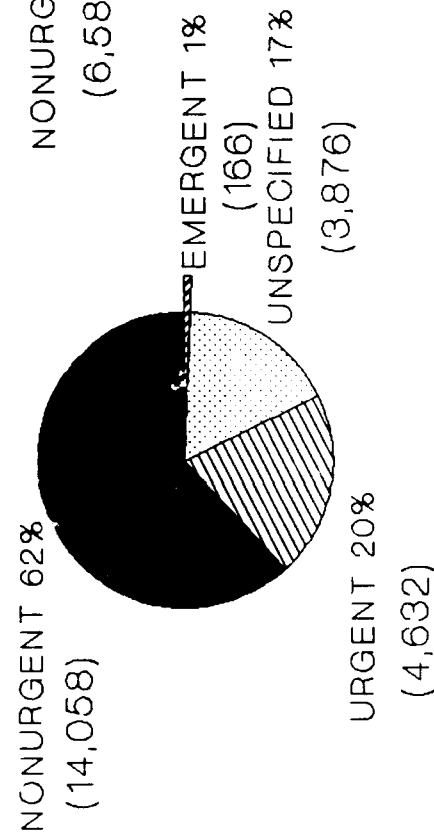
**Figure 4.** Monthly average number of emergency room clinic visits, 1982-1986.



Total ER patients = 32,505

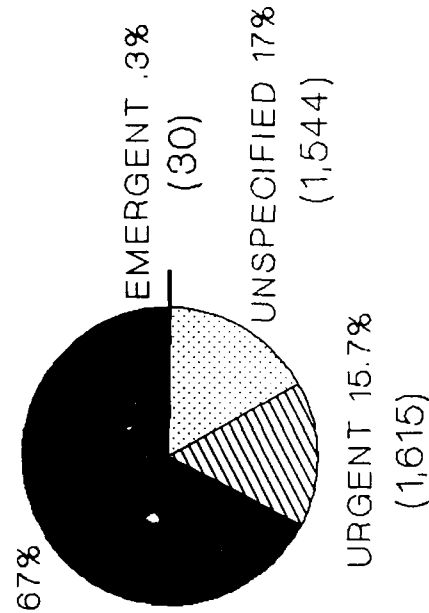
**Figure 5.** Patient triage categories for all emergency room patients, July - December 1986.

## Adult



Total = 22,732

## Pediatric



Total = 9,773

**Figure 6.** Comparison of patient triage categories for emergency room

adult and pediatric patients, July - December 1986.

Table 4

Comparison of Nonurgent Emergency Room Visits to Total Emergency  
Room Visits, July-December 1986

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Month	Total Visits	Nonurgent Visits	%
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JUL	5199	3317	63.8
AUG	5576	3809	68.3
SEP	5882	4007	68.1
OCT	5582	3148	56.4
NOV	5161	3453	66.9
DEC	5104	2908	57.0

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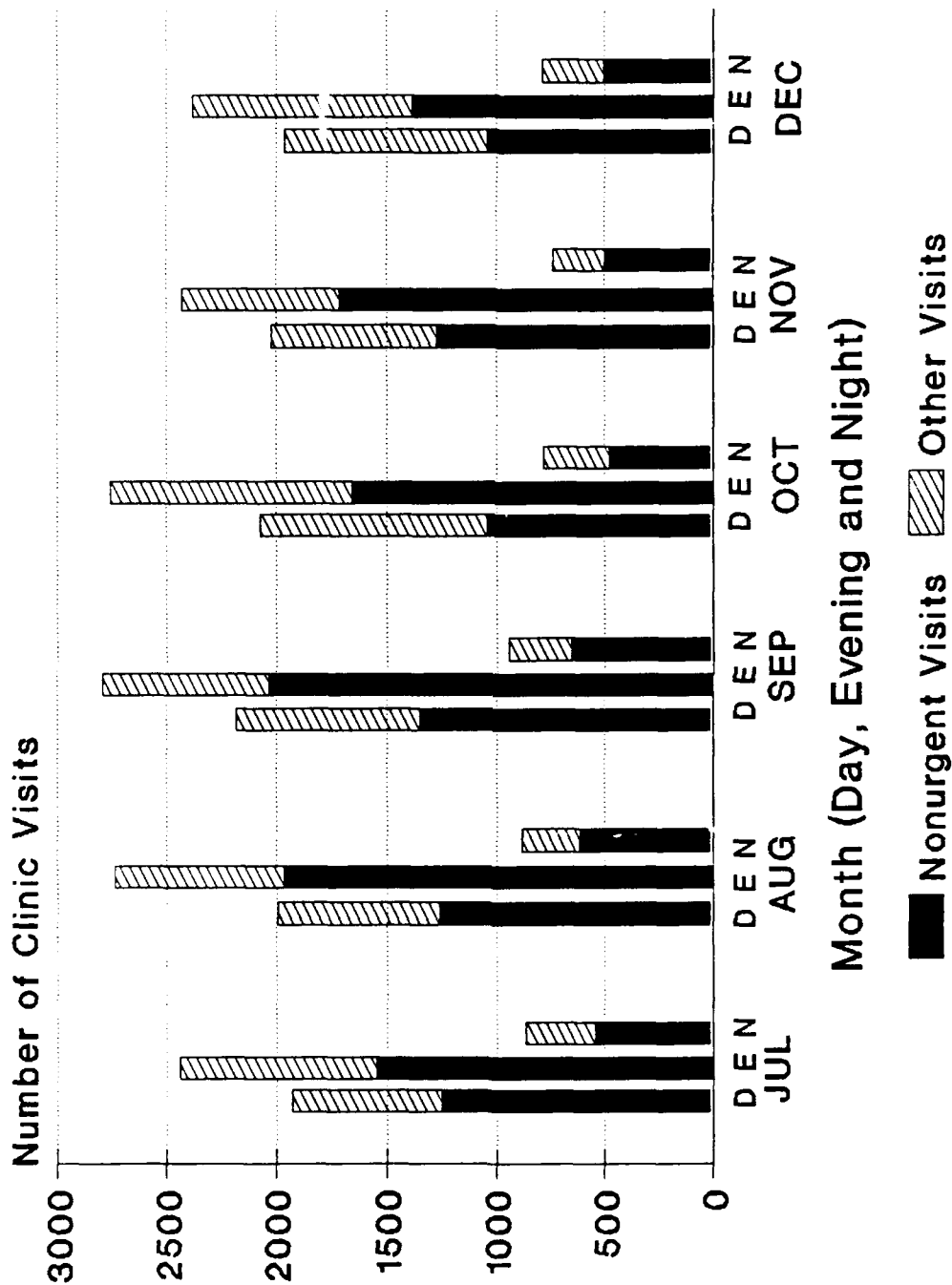


Figure 7. Comparison of emergency room clinic visits by shift,

July - December 1986.

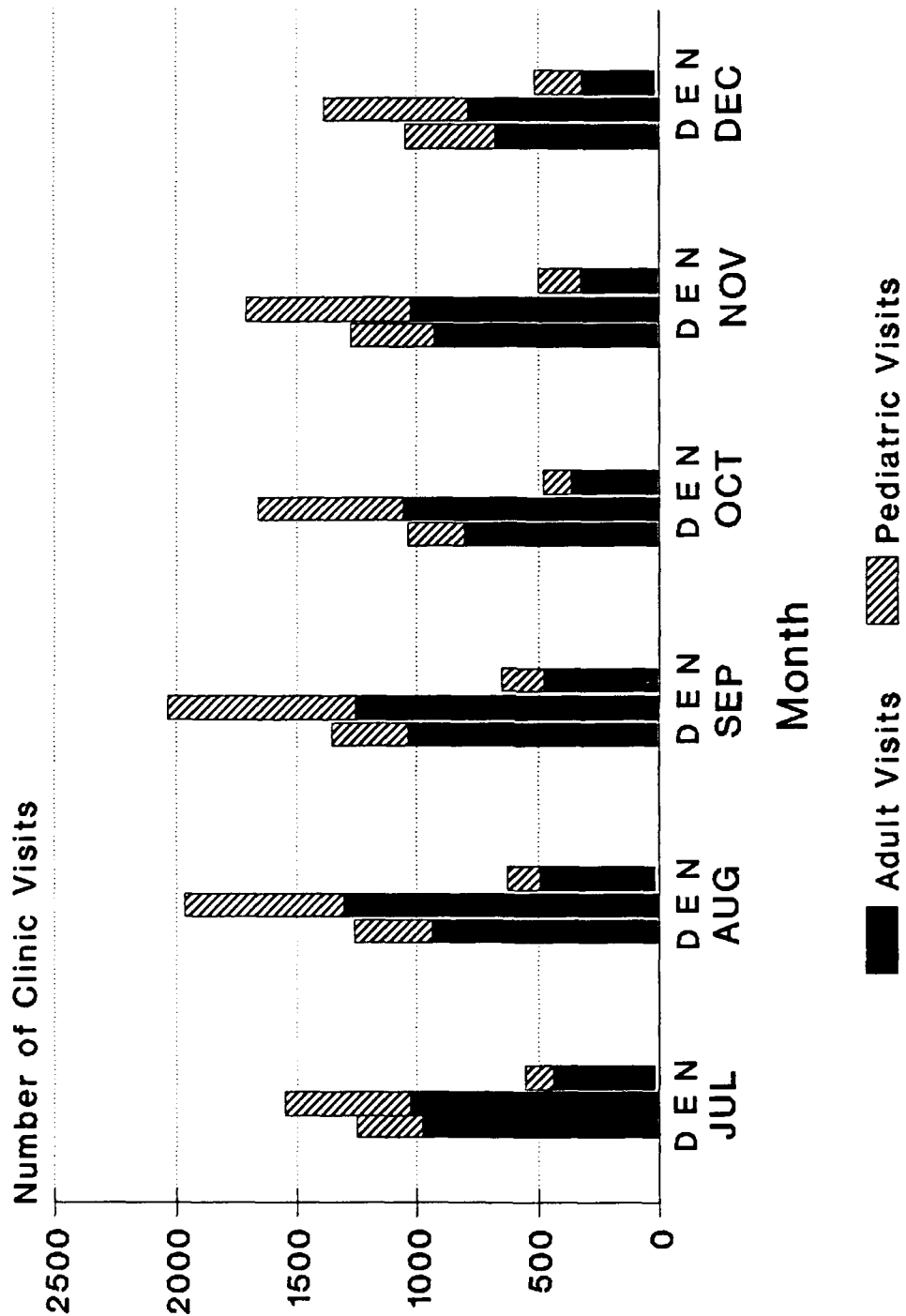


Figure 8. Comparison of nonurgent emergency room clinic visits by shift, July - December 1986.

Staff Interviews

The Chief, DEM (Dr. Dire, personal communication, January 5, 1987) voiced great concern about the volume of patients, primarily nonurgent patients, presenting for care in the ER because of the limited number of same day appointments in the General Outpatient Clinic and the Pediatric Clinic. Patients classified as nonurgent comprise 60-80 percent of all patients receiving treatment at the ER. Staffing is not a grave concern of the Chief, only limited space and increasing volumes of nonurgent patients coming to the ER. He believes the mission of the ER requires clarification, as the Emergency Medicine Residency Training Program is in jeopardy of losing accreditation due to the volume of nonurgent patients diluting the percentage of patients admitted to critical care areas. The Residency Review Committee requires at least 2-4 per cent of all patients entering the ER to be subsequently admitted to a critical care bed. The Chief, DEM feels that the ER is being asked to see patients that would better be treated in a less costly setting than an emergency room. The public's perception of DACH's ER is not a favorable one as a result of significant waiting times in the ER for



treatment of acute minor illnesses. Physician staff and residents provide treatment to patients, with the residents providing the majority of patient care under the supervision of a staff physician. Only staff physicians are permitted to moonlight, and currently 4 of 8 staff physicians moonlight at local emergency rooms.

The DCCS (Dr. Mayer, personal communication, January 23, 1987) sees a growing number of patients using the ER as limited appointments are available in the ambulatory clinics. However, he believes the ER has an adequate number of physicians to treat the patients currently accessing the ER. Likewise nursing staff is already provided at 100 percent of requirements. The relationship between the DEM and the GOC is not a direct, organizational structure; the GOC is under the direct supervision of the Department of Primary Care and Community Medicine. However, realistically patients unable to obtain a same day appointment in the GOC are forced to use the ER. The capacity of the GOC, the Pediatric Clinic, and the Women's Health Clinic have a direct effect upon the number of nonurgent patients going to the ER. The DCCS believes we must find ways to improve the efficiency of the ER and the GOC by allowing GOC physicians to

conduct triage in the ER and divert nonurgent patients from the acute care area of the ER. Nurse triage is not feasible because of the inadequate numbers of nurses available to staff that function. Staff physicians are not privileged to admit patients to the hospital but are required to consult with the appropriate hospital physician.

Residents and interns (personal communication, January 1987) seem to be the most dissatisfied with their duties and responsibilities in the ER. Their most expressed concern was the inability to be provided sufficient "hands-on" instruction and instead the emphasis is on seeing as many patients as possible. Supervision was provided by a staff physician who was readily available to the students. However due to the large volume of patients being seen in the ER, time expended to teach or research a medically unique case was not feasible. All residents and interns were unable to attend required Wednesday afternoon lectures because of their assigned duties in the ER. A typical resident work schedule depicted a 6 day work week (5-10 hour shifts, 1-12 hour shift) with a day and/or a "shift" off which did not permit sufficient time for didactic studies or research. Residents or interns were not permitted to moonlight.

Recommendations to improve the ER included the following:

establishment of a walk-in ambulatory care clinic; implementation of nurse triage; and permitting ER physicians to turn away nonurgent patients to be seen the next day at a same day appointment.

Staff physicians (personal communication, January 1987) also expressed a great concern and frustration for the volume of adult, nonurgent patients coming to the ER and felt these patients could be better managed in other ambulatory care areas of the hospital. Duties expected of staff physicians include teaching, research, direct patient care, and administrative functions. Moonlighting is permitted up to 16 hours per week. A typical schedule allowed 1 1/2 days off per week(not including weekends) and 12 hour shifts in the ER. Staff physicians also recommended the implementation of nurse triage, the establishment of a walk-in acute minor illness clinic, the extension of clinic hours in the GOC and Pediatric Clinic, and more patient education of the public on appropriately accessing the military health care system.

The Chief, DON (N. Nooney, personal communication, January 12, 1987) provided her thoughts on nurse staffing of the ER. She felt that

to implement nurse triage in the ER, special training was needed for nurses. However, even with additional training, nurses would still be unable to make a disposition on a patient, and the patient would still require evaluation by a physician, effectively putting another layer in the already cumbersome patient flow system in the ER. Nurses would be capable of prioritizing patients only. Current available nursing personnel would not be adequate to provide the additional triage function. She further stated that patients are more satisfied with being evaluated by a physician and under our system have the right to be seen by a physician.

The ER Head Nurse (M. Heil, personal communication, December 3, 1986) has held the position as Head Nurse for one year. She works under the supervision of the Chief, Ambulatory Nursing and the Chief, DEM. Telephone triage is not feasible because the patient population is too diverse. She expressed concern about the following issues: the lack of patient education for new personnel assigned to Fort Hood, the limited number of available appointments in the GOC and Pediatric Clinic, and the change in clinic hours without notification given to the ER. The Head Nurse suggested a walk-in clinic be established in the

hospital.

The ER NCOIC ( Sergeant Gyor, personal communication, December 3, 1986) has held the position for 15 months. He voiced many of the same concerns as the Head Nurse and recommended the combining of the ER with the GOC, with a designated walk-in section. Patient education also needed much improvement and could be achieved by using the Health On Wheels van, the Village Mayors, and hospital speakers, all using a prepared briefing.

#### Emergency Medicine Residency Training Program

Darnall Army Community Hospital provides one of three accredited Army emergency medicine residency training programs. All emergency medicine residency training programs must be accredited every five years by the Accreditation Council for Graduate Medical Education.

Several requirements must be met before accreditation is extended by the Residency Review Committee (RRC) for Emergency Medicine. Specifically, the percentage of critically ill or injured patients seen should be a minimum of two to four percent of the patient population or 1,000 patients per year, whichever is greater.

(Accreditation Council for Graduate Medical Education, 1986) The average percentage of critical care admissions to total patients seen in the ER was 1.34 percent during the last six months of 1986, with a total of 480 critical care admissions. (Table 5) The projected total number of critical care admissions per year would be 960 admissions.

Further, the RRC requires a teaching staff of eight physicians for DACH's emergency medicine residency training program, to include a full time internal medicine consultant. (Accreditation Council for Graduate Medical Education, 1985) Current teaching staff is seven physicians. (Table 1)

Table 5

Critical Care Admission from the Emergency Room, July-December  
1986

Month	Admissions	Admission/Tot Patients (%)
JUL	73	1.20
AUG	86	1.48
SEP	89	1.38
OCT	66	1.14
NOV	80	1.38
DEC	86	1.45
TOTAL	480	
MEAN	80	1.34

Ambulatory Care Resources to Treat Adult, Nonurgent Patients

The Supervisor of the Patient Appointment System provided the following list of clinics in the hospital which treat adult, nonurgent patients: the General Outpatient Clinic, the Women's Health Clinic, the Obstetrics and Gynecology Clinic, and the Emergency Room. All these clinics are available to patients by appointment except the ER.

The General Outpatient Clinic (GOC)

The GOC is an ambulatory clinic under the Department of Primary Care and Community Medicine. (Appendix C-2) The main functions of the clinic include diagnosis, care, treatment, and proper medical disposition of patients, providing continuity and coordination of total health care. Clinic physicians retain primary responsibility for the care of patients, as appropriate, but may refer patients to specialty clinics for consultation or admission to inpatient services. The GOC also serves as a primary Troop Medical Clinic, providing morning sick call to soldiers. (MEDDAC Supplement 1 to HSC Reg 10-1, 1985)

All patients, who are treated in the GOC, are adult (13 years or older). Typically, most patients have nonurgent medical conditions which consist of stable chronic conditions, common minor illnesses, or



gynecological problems.

Operating hours of the GOC are as follows: 0730-2130 on weekdays, 1200-2030 on weekends, and 0800-1640 on holidays. Military sick call is provided 0730-0830 each weekday.

All patients, except military sick call, are seen on an appointment basis. These appointments are scheduled through the Patient Appointment System. Normally 20 same day appointments and 14 followup appointments are scheduled each weekday per physician. In the evening clinic, each physician sees 37 appointments. On holidays and weekends, each physician sees 45 appointments. There are a limited number of GOC referral appointments from the ER for adult, nonurgent patients, 8 appointments in the afternoon, except Thursdays when 6 appointments are available due to continuing medical education, and 15 appointments in the evening. These referral appointments are made by the staff in the ER.

Physician staffing from July-December 1986 averaged a total of 11.5 physicians with an equivalent man-month of 10.6 physicians. (Table 6) The average monthly productivity of the GOC, during the same period, was 5184 clinic visits, divided between day, evening,

and weekend/holiday shifts. (Table 7) The manpower survey conducted in 1985 recommended the GOC be given a requirement for 9 physicians, based on an average monthly workload of 5384 visits per month, also divided between day, evening, and weekend/holiday shifts. (Appendix E) The available staffing to support the function of the GOC is depicted in Table 8.

Table 6

Comparison of Assigned Physician Strength in the GOC to Actual Hours  
Worked, July-December 1986

Month	HRS/M*	EOM Strength*	MM*	Hours Worked
JUL	176	11	9.4	1653
AUG	168	10	11.25	1890
SEP	168	9	8.94	1501
OCT	176	11	10.10	1779
NOV	144	12	11.86	1708
DEC	176	16	12.21	2148
MEAN		11.5	10.6	1780

Note \* Operational hours in the month (HRS/M); end of month (EOM);  
man-month (MM)

Table 7

Comparison of General Outpatient Clinic Visits by Shift.July-December 1986

---

Month	Tot Visits	Day	Evening	Weekend/Hol
<hr/>				
JUL	3593	2806	571	216
AUG	5009	4101	622	286
SEP	5017	4021	710	286
OCT	6197	4942	1035	220
NOV	5303	4352	770	181
DEC	5985	5090	725	170
<hr/>				
MEAN	5184	4219	739	227
<hr/>				

Note. Data obtained from monthly TRIPAS report.

Table 8

General Outpatient Clinic Staffing Allocations, 1986

Position	Req	Auth	Asgn
Physician	9	8	12
Registered Nurse	0	0	1
Vocational Nurse	2	2	2
Nursing Assistant	2	1	1
Medical Specialistist	6	6	6
Medical Clerk	3	2	2
Total	22	19	24

Note. Definitions of required, authorized, and assigned are in Appendix E.

The average number of gynecology patients requiring a pelvic examination in the GOC was 173 women per month. (Table 9) This data was collected from February - July 1987, as no accurate gynecology workload in the GOC was maintained prior to 1987.

Table 9

Monthly Gynecology Workload in the General Outpatient Clinic,February-July 1987

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Month	Exam Rm #1	Exam Rm #2	Total
<hr/>			
FEB	160	93	253
MAR	108	96	204
APR	129	95	224
MAY	55	51	106
JUN	76	53	129
JUL	70	53	123
<hr/>			
MEAN	100	73	173
<hr/>			

### Contrast and Comparison of Alternatives

#### Alternative A. Maintain the Present Patient Management System

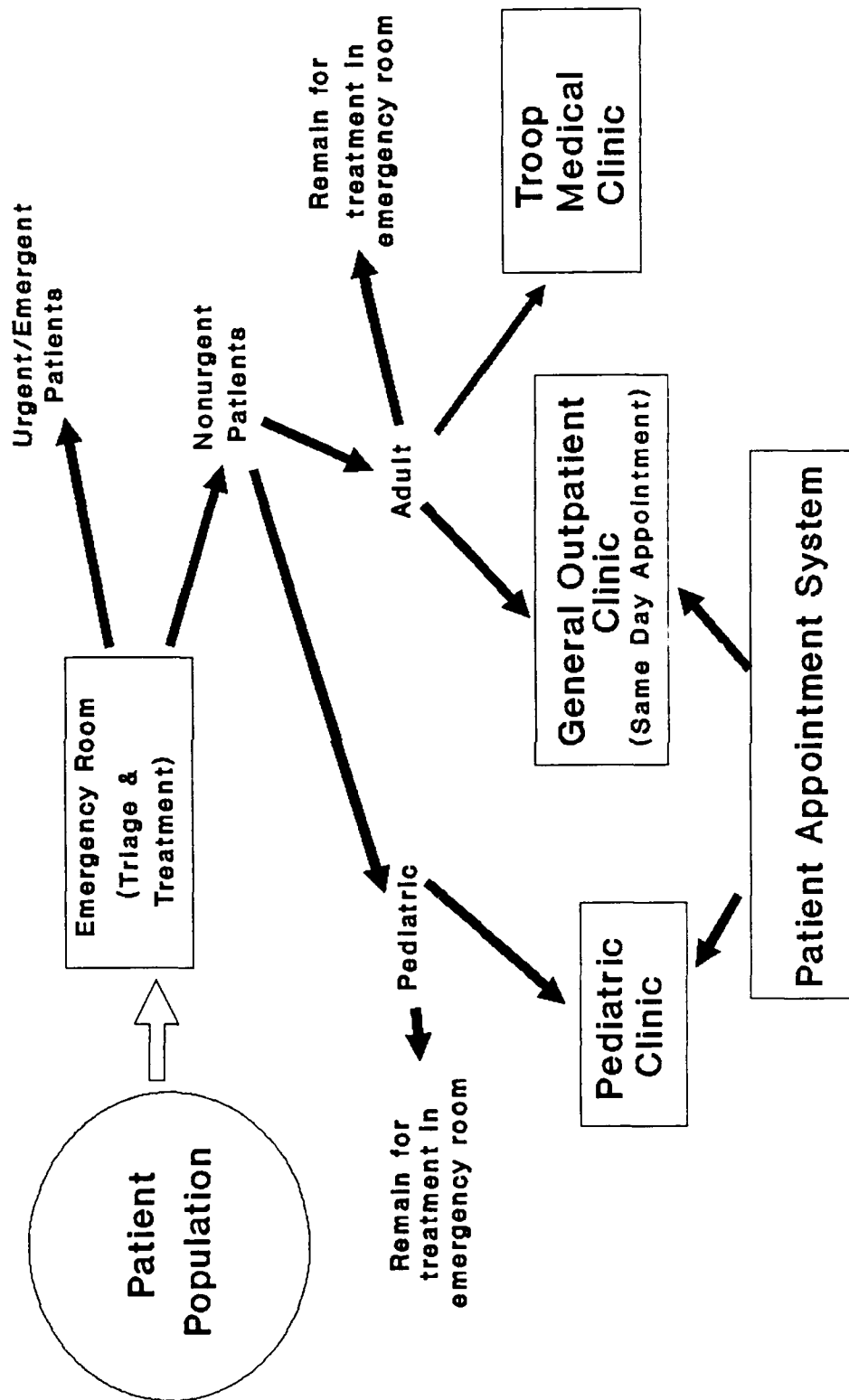
The first alternative, to maintain the present system of managing adult, nonurgent patients (Figure 9), is not practical, given the volume of patients seeking medical care in the ER. The ER is not the appropriate setting for nonurgent patients, as less expensive levels of medical care are available. Further the intent is to shift the nonurgent patients from the ER to the appropriate level of medical care, reserving the ER resources for acute, trauma patients.

As a result, the percentage of critical care admissions will increase to ensure future accreditation of the emergency medicine residency training program. Further, ER residents and interns will consequently have more time to devote to more serious patients, thus enhancing their training. Patient complaints and frustration will increase as more demand is placed upon the ER staff as waiting times increase with increasing patient volume.

#### Alternative B. Establish a GOC Evening Walk-in Clinic

The second alternative, the establishment of an evening shift (1500-2300) GOC walk-in clinic has more merit. As already





**Figure 9.** Current patient management system in the emergency room.

discussed, the majority of adult, nonurgent patients access the medical care system during the evening, when the ER is the primary resource for medical care. Since the GOC is an appointment only clinic, if a patient has not made an appointment before 1600 when PAS closes, the only alternative is to walk-in to the ER. This creates unnecessary frustration for patients, since they frequently must wait several hours before treatment for minor illnesses. An evening GOC walk-in clinic provides the flexibility for the ER staff to shift adult nonurgent patients from a more resource-intensive level of medical care to an appropriate level of medical care. With the shifting of adult, nonurgent patients to the GOC, the percentage of critical care admissions from the ER will increase.

A considerable disadvantage to the establishment of a walk-in clinic is the potential for increasing patient demand for medical services, given the large patient population in the area. Routine appointments for the GOC are often scheduled by 0930 each day, with many more patients still desiring an appointment. An appointment system allows limitation of appointments based upon existing resources. It is felt by the Chief, GOC that removing administrative

barriers to ambulatory medical care will very soon flood the clinic's resources and create an environment that is even more frustrating for patients and staff.

Alternative C. Establish an Evening Shift GOC Clinic with GYN

Patients Shifted to OB/GYN or WHC

The same observations concerning alternative B can be made about alternative C, with regard to establishing an evening GOC clinic. Additionally, the Chief, GOC feels there are too many gynecology patients being treated in the GOC who could be more appropriately treated in either the OB/GYN Clinic or the WHC. He estimated the number to comprise 60 percent of his clinic workload. (Personal communication, January 20, 1987)

Analysis of the gynecology workload in the GOC revealed an average of 173 women per month who required use of the designated gynecology examination rooms, 3 percent of the total monthly clinic workload. This is not as large a number as initially suspected. However, use of these rooms and the need for a chaperone cannot be predicted, nor are gynecology patients evenly spaced throughout the day.

Given the low number of gynecology patients in the GOC requiring a specially-equipped room and a chaperone, it is not practical to implement a new study to determine the impact of this alternative. Further, ER residents should see gynecology patients as part of their training. (Fort Hood MEDDAC, May 87)

Alternative D. Establish an Evening Shift Initial Care Clinic (ICC)

The establishment of an evening (1500-2300) ICC is the final alternative. The function of this clinic would be to triage ambulatory ER patients for referral to either the GOC by appointment or remain for treatment in the ER. The ICC would be staffed with a GOC physician, trained in triage and collocated with the ER. This procedure is preferable to simply sending the patient directly to the GOC, as a health care provider determines the appropriate level of medical care.

This alternative overcomes the disadvantage of alternative B with regard to increasing patient demand coupled with finite medical resources. Patients would still be triaged in the ER, by a GOC physician, to control the number of patients referred to the GOC. As

time and staffing permit, these patients could be treated in the ER, by the GOC physician. Once GOC evening appointments are filled, the ICC physician would have available same day GOC appointments for the next morning for adult, nonurgent patients who arrive in the ER when medical resources are not available. Active duty personnel, with nonurgent medical conditions, would be referred to their Troop Medical Clinic, if all other medical resources are exhausted.

Since the GOC is under the supervision of the Department of Primary Care and Community Medicine, not the Department of Emergency Medicine, a GOC physician has a direct link to additional medical resources and a personal interest in accomplishing the GOC's mission. Also, triage by a GOC physician, frees up an ER physician to provide patient treatment and teaching to residents.

Clinic visit workload, provided in the ICC, would be credited to the GOC, not the ER. Consequently, the number of nonurgent patients treated in the ER would decline with a concurrent rise in the percentage of critical care admissions from the ER. Further, GOC workload would increase, thus utilizing more of the underutilized physician capacity of the GOC.

### Chapter III. Conclusions and Recommendations

#### Conclusions

A significant volume of adult, nonurgent patients sought medical care from DACH's ER during the study period, July through December 1986. Emergency Room records were reviewed to determine patient triage category and age by shift. Of the total number of patients treated in the ER, 64 percent were identified as nonurgent, 19 percent as urgent, 17 percent as unspecified, and 1 percent as emergent. Review of the unspecified category revealed the majority of the patients would have been classified as nonurgent, as many of these patients were referred to other ambulatory clinics. Thus, nearly 80 percent of the patients treated in the ER had nonurgent medical conditions.

Further, the majority of the ER visits were credited to the evening shift, 1500-2300, compared to the day or night shifts. Of the patients who visited the ER during the evening shift, the majority were adult, nonurgent patients (13 years of age or older) compared to pediatric patients.

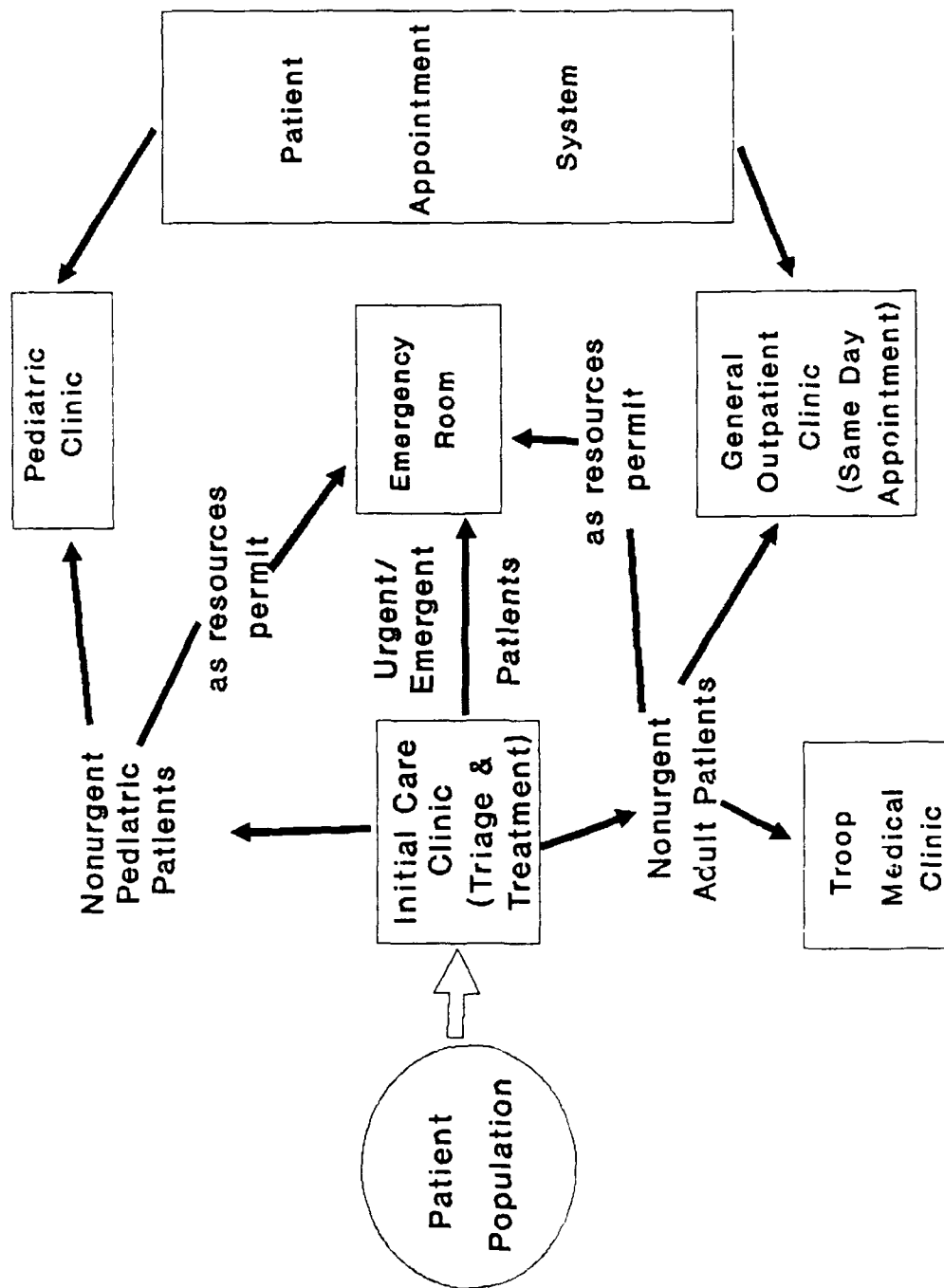
With the increasing volume of nonurgent patients seeking

medical care via the ER, the percentage of ER patients being admitted to intensive care units has declined. As a result, the Emergency Medicine Residency Training Program is in danger of losing its accreditation from the Accreditation Council for Graduate Medical Education which requires a two to four percent ER admission rate to intensive care units.

With a large supported patient population in the Fort Hood area and an increasing retiree population, the number of patients visiting the ER is likely to increase. This situation is exacerbated by an ambulatory clinic with lower than expected physician productivity, specifically the GOC.

#### Recommendations

In order to provide the most resource efficient method of initial evaluation and treatment of adult, nonurgent patients who visit Darnall Army Community Hospital's emergency room, implementation of alternative D is recommended. (Figure 10) The recommended implementation plan is attached at Appendix H.



Elgure 1Q. Recommended patient management system in the emergency room.



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## Appendix A

## Interview Questions

Interview Questions (staff physicians, residents, and interns)

1. Introductions, explanation of the purpose of the interview, and assurance that confidentiality will be maintained by designating each physician interview with a letter.
2. What is your current position in the DEM?
3. How long have you worked in the DEM?
4. What type of supervision are you given?
5. Describe your rotation schedule between working in the emergency room, teaching or classes, time off, and study or class preparation time.
6. What shift do you work on?
7. Do you moonlight?
8. What types of patients do you evaluate?
9. How do you triage patients?
10. Do you feel that you are seeing patients who should be referred to another clinic or level of care?
11. How do you document the workload you produce?
12. What improvements could be made in the emergency room?

13. Do you wish to contribute any other information about working in the DEM?

Interview Questions (Chief, DEM)

1. Introductions and explanation of the purpose of the interview.
2. What do you see as the pressing concerns or issues with the management of patients who access our hospital through the emergency room?
3. What is the mission of the emergency room?
4. How is the workload documented in the emergency room?
5. What types of patients are seen in the emergency room?
6. What effect does the Emergency Medicine Residency Training Program have on the operation of the emergency room?
7. How are resident and staff working schedules determined, and who is authorized to moonlight?
8. Do you want to add further comments?

Interview Questions (DCCS)

1. Introductions and explanation of the purpose of the interview.
2. What do you see as the pressing concerns or issues with the management of patients who access our hospital through the emergency

room?

3. What privileges do staff physicians, residents, and interns have?
4. Do you believe the physician staffing level in the emergency room is adequate for the numbers of patients treated?
5. What is the organizational relationship between the DEM and the GOC?
6. How might the distribution of patient workload be improved?
7. Do you have anything that you want to add?

Interview Questions (Chief, DON)

1. Introductions and explanation of the purpose of the interview.
2. Do you feel that the level of nurse staffing is adequate in the emergency room for the volume of patients seen?
3. How do you feel about nurse triage instead of physician triage in the emergency room?
4. What is the scope of practice for nurses working in the emergency room?
5. Do you have any further comments?

Interview Questions (Head Nurse and NCOIC)

1. Introductions and an explanation of the purpose of the study.
2. What is your current position in the DEM?

3. How long have you worked in the DEM?
4. What type of supervision are you given?
5. What types of patients are initially evaluated and treated in the emergency room?
6. How do you document the workload produced in the DEM?
7. What improvements could be made in the emergency room?
8. Do you wish to contribute any other information about working in the DEM?

Interview Questions (Chiefs of GOC and OB/GYN Clinic)

1. Introductions and explanation of the purpose of the interview.
2. What is the mission of your clinic?
3. What are the operating hours for your clinic?
4. What staff are available to provide the patient care mission?
5. What types of patients does your clinic treat?
6. How do patients access the treatment you are organized to provide?
7. What do you consider the optimum patient care provider productivity level i. e., number of appointments per hour?
8. What is the typical length of a patient appointment?
9. How do you feel about the volume of nonurgent adult patients being



evaluated in the ER?

10. How might workload be shifted to accommodate the demand for patient care?

11. Do you have any further comments?

Interview Questions (PAS Supervisor)

1. Introductions and explanation of the purpose of the interview?

2. What is the mission of PAS?

3. What are the operating hours for PAS, and how do patients access the appointment system?

4. What staff are available to make clinic appointments?

5. What is the volume of calls received and the actual number of appointments made per day and per month?

6. What clinics provide initial evaluation and treatment of adult nonurgent patients?

7. What appointments are available for these clinics?

8. How often are changes made to provider work schedules in these clinics, and how much advance notice are you given?

9. How are appointment cancellations monitored and refilled?

10. Do you have any further comments?

Appendix B

Emergency Room Forms

1. SF 558, Emergency Care and Treatment, June 1982
2. HSC Form 415a-R, Daily Patient Log Sheet, 15 October 1984
3. Medical Summary Report, MED-302, DA Form 2789 series

<b>EMERGENCY CARE AND TREATMENT</b> (Medical Record)				(When Filled Out by Patient)		(When Filled Out by Provider)				
DATE		TIME		TRANSPORTATION TO HOSPITAL (Attach care enroute sheet)		CURRENT MEDS, (tetanus immunization and other data)				
DAY	MONTH	YEAR		<input type="checkbox"/> PRIVATE VEHICLE	<input type="checkbox"/> AIR LIFT	HISTORY OBTAINED FROM <input type="checkbox"/> PATIENT <input type="checkbox"/> OTHER (Specify)				
				<input type="checkbox"/> OTHER (Specify)		ALLERGIES				
PATIENT'S HOME ADDRESS OR DUTY STATION (City, State and ZIP Code)						HOME TELE. NO. (Inc. area code)				
CHIEF COMPLAINT(S) (Include symptoms, duration)						SEX	AGE			
						POSSIBLE THIRD PARTY PAYER <input type="checkbox"/> YES <input type="checkbox"/> NO				
VITAL SIGNS			DESCRIBE (1) Subjective data (Pertinent History); (2) Objective data (Examination - include results of tests and x-rays); (3) Assessment (Diagnosis); (4) Plan (Treatment/Procedures - include medication given and follow up)				TIME SEEN BY PROVIDER			
TIME										
BP										
PULSE										
RESP.										
TEMP.										
WT. (Child)										
CATEGORY (See reverse)										
<input type="checkbox"/> EMERGENT										
<input type="checkbox"/> URGENT										
<input type="checkbox"/> NON-URGENT										
ORDERS			INITS.		TIME					
ASSESSMENT/DIAGNOSIS										
DISPOSITION (Check all that apply)										
<input type="checkbox"/> HOME			<input type="checkbox"/> FULL DUTY							
QUARTERS										
<input type="checkbox"/> 24 Hrs.			<input type="checkbox"/> 48 Hrs.			<input type="checkbox"/> 72 Hrs.				
MODIFIED DUTY UNTIL										
DAY			MONTH		YEAR					
REFERRED TO (Indicate clinic)										
<input type="checkbox"/> EMERGENCY			<input type="checkbox"/> TODAY							
<input type="checkbox"/> 72 HOURS			<input type="checkbox"/> ROUTINE							
ADMIT. TO HOSP. UNIT/SERVICE										
CONDITION UPON RELEASE										
<input type="checkbox"/> IMPROVED			<input type="checkbox"/> UNCHANGED							
<input type="checkbox"/> DETERIORATED										
TIME OF RELEASE:										

(CONTINUE ON SF 507, IF NEEDED)

PATIENT'S IDENTIFICATION (Mechanical imprint)  
FOR WRITTEN ENTRIES GIVE: Name - last, first, middle;  
SSN; DOB, service status, name and relation of sponsor or next  
of kin. (IMPORTANT: LIST FACILITY HOLDING TREAT-  
MENT RECORD).

SIGNATURE OF PROVIDER AND ID STAMP

INSTRUCTIONS TO PATIENT (Include medications ordered, any limitations and follow-up plans)

EMERGENCY CARE AND TREATMENT

Medical Record Copy

STANDARD FORM 558 (REV. 6-52)  
Prescribed by GSA and ICMR  
FPMR (41 CFR) 101-11.806-8

SUPPLEMENTAL <b>DAILY PATIENT LOG SHEET</b> <input type="checkbox"/> Inpatient <input type="checkbox"/> Outpatient		Instructions: Use separate log sheets for inpatients and for outpatients. Use guide lines to draw columns of desired width for collection of clinic specific data. Indicate patient beneficiary status for reporting purposes.		SHEET _____ OF _____ DATE _____
CLINIC SERVICE TITLE/COO		Referring Clinic		
Number	Patient's name Initial	FMP	SSN (Last four digits)	
Total				
1				
2				
3				
4				
5				
6				
7				
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12				
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SAMPLE

Sample of Supplemental Daily Patient Log Sheet



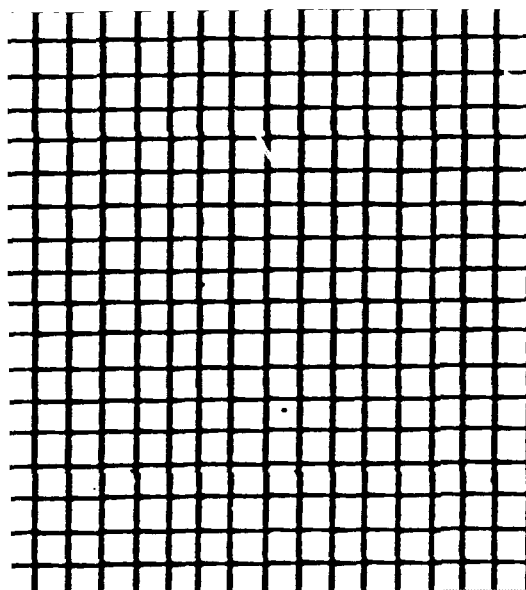
LINE NO. 1-71	PATIENT CATEGORY	CODE	ADMISSIONS				BED DAYS				INPAT VISITS				OUTPAT VISITS				SICK DAYS							
	CARD COLUMNS		18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION																									
42	ACTIVE DUTY	O 1	0																							
43	RESERVE	O 2	0																							
44	RETIRED	O 3	0																							
45	DEPENDENT ACTIVE DUTY	O 5	0																							
46	DEPENDENT RETIRED/OCEASED	O 6	0																							
CIVILIAN EMPLOYEES																										
47	STATE DEPARTMENT EMPLOYEE	M 1	0																							
48	OTHER FEDERAL DEPARTMENT ENPL	M 2	0																							
49	CIV ENPL OOD AUTH OCC HEALTH	M 2	6																							
50	OTHER FEDERAL AGENCY EMPLOYEE	M 3	0																							
51	CIV ENPL US GOVT DISABLE RET EXAM	M 3	8																							
52	NONMILITARY FEDERAL BENEFICIARY	M 4	0																							
53	OTHER US GOVT ENPL REMOTE AREAS	M 5	0																							
DEPENDENT CIVILIAN EMPLOYEES																										
54	DEPN NON-ODD FEDERAL AGENCY	J 1	0																							
55	DEPN IN REMOTE AREAS	J 2	0																							
56	DEPN OTHER FEDERAL AGENCY	J 3	0																							
OTHER BENEFICIARIES																										
57	VA BENEFICIARY	K 1	0																							
58	OWCP BENEFICIARY	K 2	0																							
59	SOLDIER/AIRMAN HOME	K 3	0																							
60	OTHER FEDERAL AGENCY BENEFICIARY	K 4	0																							
61	AMERICAN INDIAN/ESKIMO	K 4	2																							
62	MICRONESIAN	K 4	3																							
63	CONTRACT EMPLOYEE	K 5	0																							
64	SEAMEN/NOT RSTS-RSC	K 5	1																							
65	PRIV RELIEF ACT BENEFICIARY	K 7	0																							
66	PEACE CORPS/VISTA/JOB CORPS	K 7	0																							
PRISONERS																										
67	WAR/INTERN/RETAIN	Q 1	0																							
68	OTHER PRISONERS	R 1	0																							
FOREIGN NATIONALS																										
69	INET/SALES TRAINEE	S 1	0																							
70	OTHER FOREIGN MILITARY	S 2	0																							
71	NATO EM	S 2	3																							
72	NATO OFFICER	S 2	4																							
73	FOREIGN CIVILIAN	S 3	0																							
74	FOREIGN NATL NATO CIV PERS. NEC	S 3	2																							
75	DEPENDENT FOREIGN MILITARY	S 4	0																							
76	DEPENDENT FOREIGN CIVILIAN	S 5	0																							
77	OTHER FOREIGN NATIONALS	S 6	0																							
OTHERS																										
78	APPLICANT/REGISTRANT	I 1	0																							
79	DESIGNEE SECRETARY DEFENSE	I 2	0																							
80	CIVILIAN CLAIMANT	I 3	0																							
81	OTHER AUTHORIZED PERSONNEL	I 4	0																							
82	SEAMAN RSTS/RSC	I 4	5																							
83	FORMER SPOUSE, AD/RETIRED	I 5	2																							
84	FORMER FEMALE SM	I 6	0																							
85	ALL OTHERS, NEC	I 7	0																							
86																										
87	TOTAL - SECTION I																									

NTF CODE				MEDICAL SUMMARY REPORT - SECTION II																		REPORTS CONTROL SYMBOL				MONTH YEAR			
1	2	3	4	For use of this form, see AR 40-400: the proponent agency is the Office of The Surgeon General																		7ED-302(R3)				8	9	10	11
LINE NO. 12-14	CLINICAL SERVICE			CODE		ADMISSIONS					BED DAYS					INPAT VISITS					OUTPAT VISITS								
	CARD COLUMNS			15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35					
	MEDICAL CARE																												
88	INTERNAL MEDICINE			A	A																								
89	ALLERGY/IMMUNOLOGY			A	N																								
90	CARDIOLOGY			A	B																								
91	DERMATOLOGY			A	D																								
92	DIABETIC			A	D																								
93	ENDOCRINOLOGY			A	E																								
94	GASTROENTEROLOGY			A	F																								
95	HEMATOLOGY			A	G																								
96	HYPERTENSION			A	P																								
97	NEPHROLOGY			A	I																								
98	NEUROLOGY			A	J																								
99	NUTRITION			A	Q																								
100	ONCOLOGY			A	K																								
101	PULMONARY/UPPER RESPIRATORY DISEASE			A	L																								
102	RHEUMATOLOGY			A	M																								
103	INFECTIOUS DISEASE			A	V																								
SURGICAL CARE																													
104	GENERAL SURGERY			B	A																								
105	CARDIOVASCULAR/THORACIC			B	B																								
106	NEUROSURGERY			B	D																								
107	OPHTHALMOLOGY			H	A																								
108	ORAL SURGERY			B	E																								
109	ORGAN TRANSPLANT			B	L																								
110	OTORRHOLOGY			H	B																								
111	PEDIATRIC SURGERY			B	F																								
112	PLASTIC SURGERY			B	B																								
113	PROCTOLOGY			B	H																								
114	UROLOGY			B	I																								
115	HEAD & NECK SURGERY			B	K																								
116	PERIPHERAL VASCULAR SURGERY			B	N																								
OBSTETRICAL/GYNECOLOGICAL CARE																													
117	FAMILY PLANNING			C	C																								
118	GYNECOLOGY			C	A																								
119	OBSTETRICS			C	B																								
PEDIATRIC CARE																													
120	PEDIATRICS			D	A																								
121	ADOLESCENT PEDIATRICS			D	C																								
122	NEONATAL SURGERY			D	B																								
123	WELL BABY			D	D																								
ORTHOPEDIC CARE																													
124	ORTHOPEDIC			F	A																								
125	CAST			F	C																								
126	HAND SURGERY			B	J																								
127	NEUROMUSCULOSKELETAL SCREENING			F	D																								
128	ORTHOPEDIC APPLIANCE			F	E																								
129	PODIATRY			F	B																								
PSYCHIATRIC CARE																													
130	PSYCHIATRY			G	A																								
131	PSYCHOLOGY			G	D																								
132	CHILD GUIDANCE			G	B																								
133	MENTAL HEALTH			G	C																								

LINE NO. 12-16	CLINICAL SERVICE	CODE		ADMISSIONS					BED DAYS					INPAT VISITS					OUTPAT VISITS				
	CARD COLUMNS	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	3	
	FAMILY PRACTICE CARE																						
134	FAMILY PRACTICE MEDICINE	E	A																				
135	FAMILY PRACTICE SURGERY	E	B																				
136	FAMILY PRACTICE OBSTETRICS	E	C																				
137	FAMILY PRACTICE GYNCOLOGY	E	D																				
138	FAMILY PRACTICE PEDIATRICS	E	F																				
139	FAMILY PRACTICE ORTHOPEDICS	E	G																				
140	FAMILY PRACTICE PSYCHIATRY	E	H																				
PRIMARY MEDICAL CARE																							
141	PRIMARY CARE	I	G																				
142	MEDICAL EXAMINATIONS	I	F																				
143	OPTOMETRY	H	C																				
144	AUDIOLOGY	H	D																				
145	SPEECH PATHOLOGY	J	S																				
146	ACUTE MINOR ILLNESS (AMIC)	I	T																				
147	EMERGENCY MEDICAL CARE	I	C																				
148	FLIGHT MEDICINE CARE	I	D																				
ANCILLARY SERVICES																							
149	INHALATION/RESPIRATORY THERAPY	J	I																				
150	OCCUPATIONAL THERAPY	J	K																				
151	PHYSICAL MEDICINE AND REHABILITATION	J	M																				
152	PHYSICAL THERAPY	J	N																				
153	SOCIAL WORK SERVICES	J	R																				
154	OCCUPATIONAL HEALTH	K	A																				
155	COMMUNITY HEALTH NURSE	I	B																				
156	IMMUNIZATION	K	B																				
157	PHARMACY - WEIGHTED VALUES	J	X																				
158	CLINICAL PATHOLOGY - WEIGHTED VALUES	J	C																				
159	ANATOMICAL PATHOLOGY- WEIGHTED VALUES	J	A																				
160	BLOOD BANK - WEIGHTED VALUES	J	B																				
161	RADIOLOGY, DIAGNOSTIC - WEIGHTED VALUES	J	P																				
162	RADIOLOGY, THERAPEUTIC - WEIGHTED VALUES	J	Q																				
163	ELECTROCARDIOGRAPHY (EKG)	J	E																				
164	ELECTROENCEPHALOGRAPHY (EEG)	J	O																				
165	ELECTRONEUROMYOGRAPHY (EMG)	J	F																				
166	PULMONARY FUNCTION - WEIGHTED VALUES	J	O																				
167	CARDIAC CATHETERIZATION - WEIGHTED VALUES	J	T																				
168	NUCLEAR MEDICINE - WEIGHTED VALUES	J	J																				
169	X-RAY FILMS EXPOSED	J	M																				
170	FLUOROSCOPY	J	S																				
171	PHYSICAL EXAMS - COMPLETE	I	K																				
172	PHYSICAL EXAMS - FLIGHT	I	L																				
173	NEUROMUSCULOSKELETAL EXAMS	I	P																				
174	OTHER EXAMS	I	N																				
175	PSYCHOLOGICAL TESTS	I	R																				
176																							
SPECIAL CARE UNITS																							
177	CORONARY CARE	A	C																				
178	ICU - MEDICAL	A	H																				
179	ICU - SURGICAL	B	C																				
180	ICU - NEONATAL	O	E																				
181	OTHER CARE NEC	X	X																				
182	TOTAL (Lines 58 through 155)																						



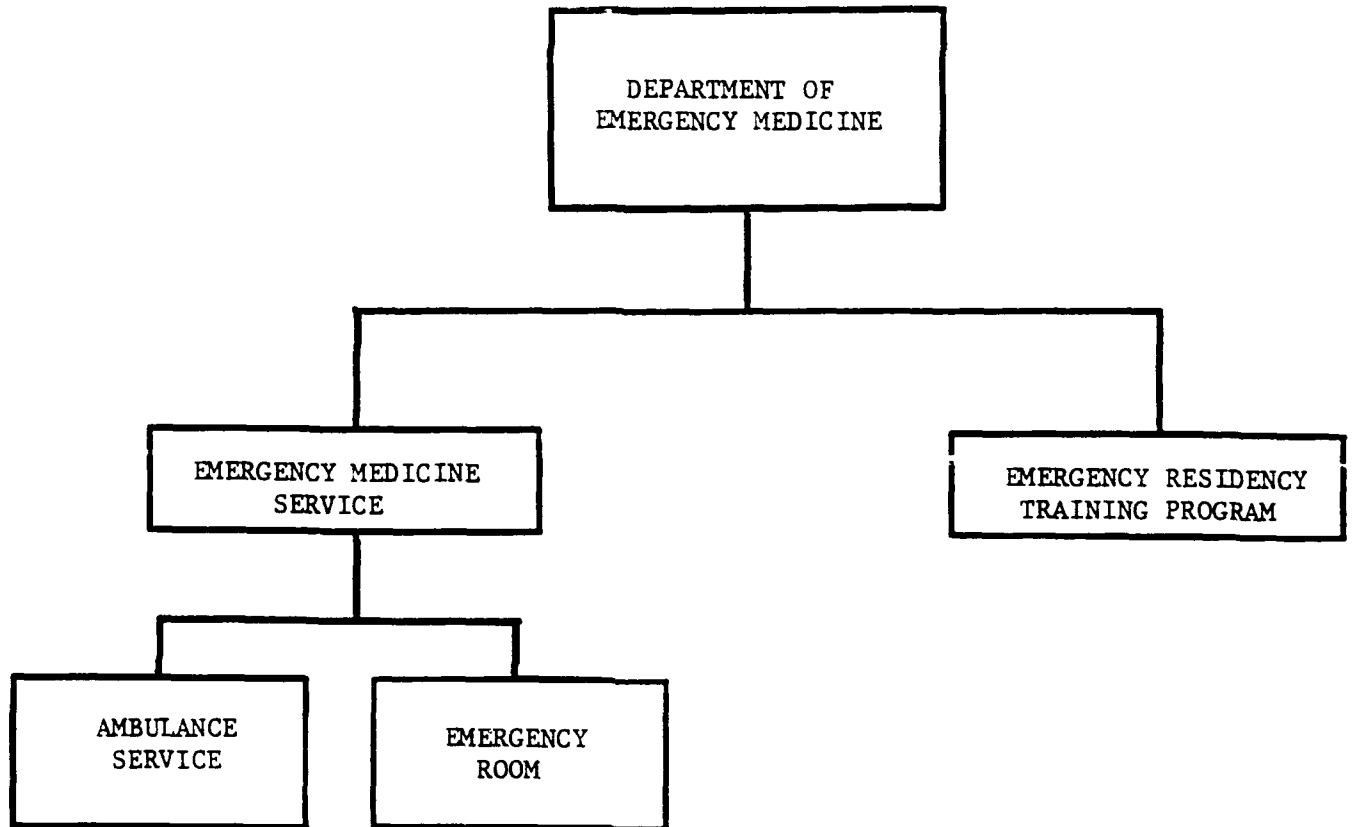


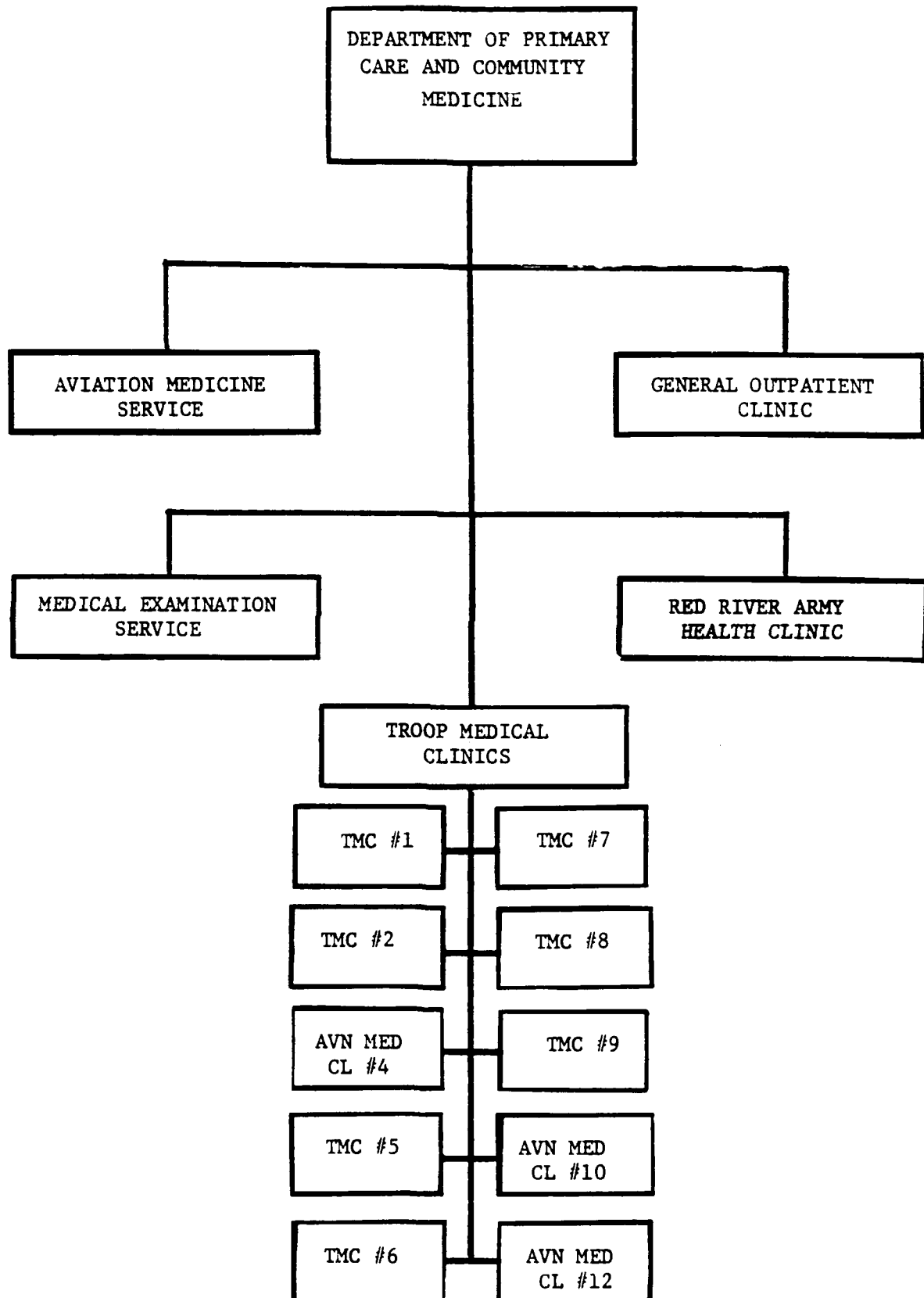


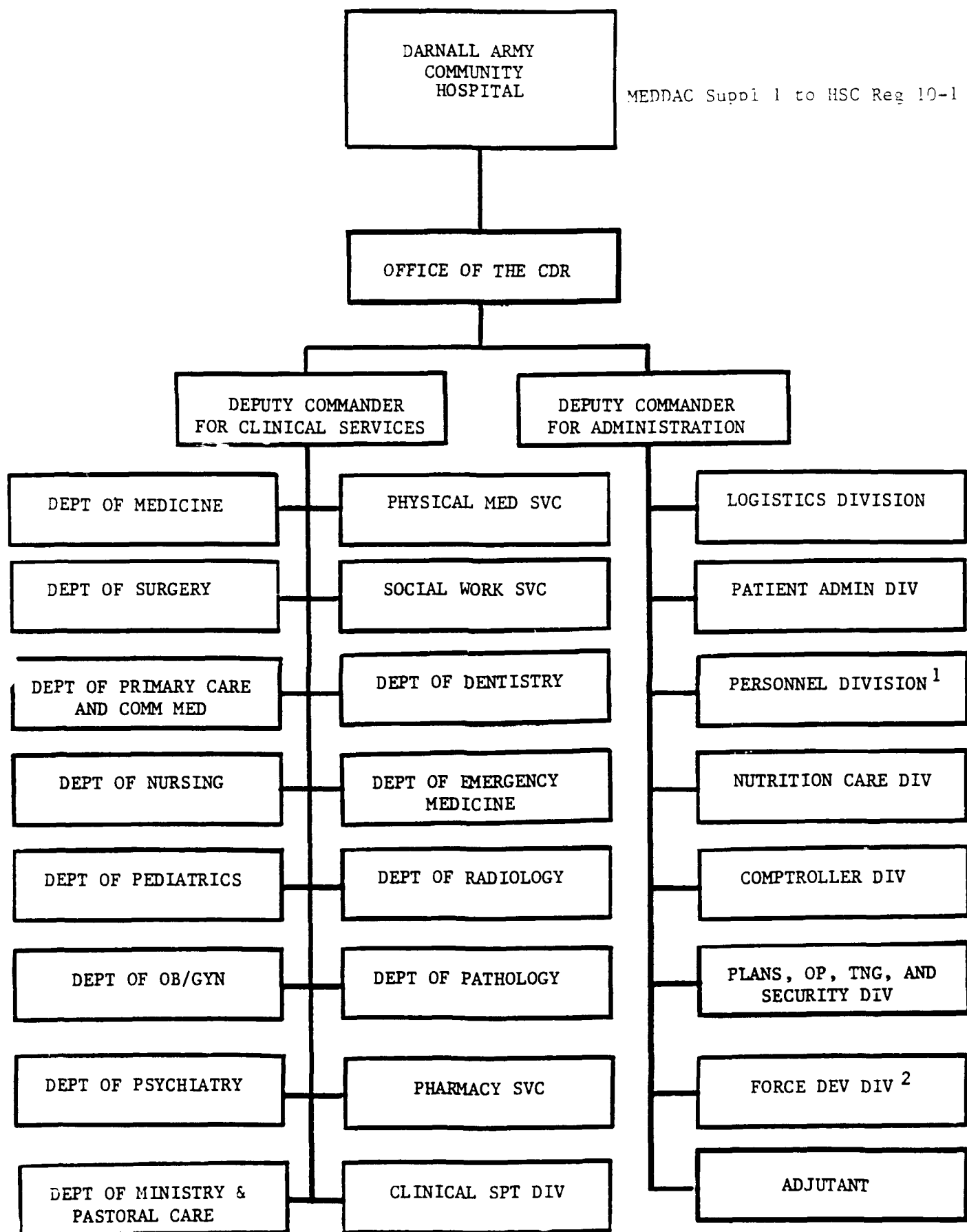
## Appendix C

### Organizational Charts

1. Department of Emergency Medicine
2. Department of Primary Care and Community Medicine
3. Darnall Army Community Hospital







Appendix D

Manpower Survey Reports

1. Department of Emergency Medicine Schedule X
2. Department of Primary Care and Community Medicine Schedule X

MAJOR STAFF ELEMENT  
Port Hood, MEDDAC

DIVISION  
Department of Emergency Medicine

BRANCH  
Chief, Department of Emergency Medicine

SECTION OR UNIT  
Emergency Room

SHEET NO.  
12

LINE NO.  
4

DESCRIPTION OF WORK PERFORMED  
The work performed is the same as Yardstick Code 557-55 plus the Emergency Medicine Residency and PA Fellowship, a proportionally large number of critically ill or injured patients, a large number of civilian emergencies, and providing an attendant for the patient transport bus to BAMC.

SECTION A - SUMMARY OF MANPOWER									
YARDSTICK CODE	WO	ENL	US CIV	NON-US CIV	TOTAL MAN-POWER SUBJ TO ALLOC	OTHER MANPOWER	US	NON-US	TOTALS
557-55	23	15	14	0	36	0	0	0	55
WORK UNIT	9	12	12	0	53	0	0	0	36
Clinic Visits (thousand)	27	12	14	0	77	0	0	0	60
1. ALLOCATION	29	27	21	0	59	0	0	0	79
2. ACTUAL STRENGTH	27	17	15	0	59	0	0	0	61
3. RECD BY CO									
4. RECD BY SURVEY TEAM									

SECTION C - MANPOWER

SECTION B - PERFORMANCE DATA									
YEAR AND MONTH	AVG STR	TOTAL MAN-HOURS WORKED	HRS OP MO	EQUIV MONTHS (c + d)	NO. OF WORK UNITS	W/L PERSON (f + g)	ALOC STR	RANK OR GRADE	ACTUAL STR
1984/05	27	5218	176	29.7	4.8	.16	1	MAJ	1
OCT	28	5026	160	31.4	4.2	.13	4	CPT	2
NOV	30	5483	160	34.3	4.3	.13			3
DEC	29	5177	176	29.4	4.9	.17			1
JAN	27	4640	152	30.5	4.4	.14	1	MAJ	1
FEB	27	5544	168	33.0	4.6	.14	3	CPT	1
MAR	29	5481	176	31.1	4.7	.15	1	E7	1
APR	29	5532	176	31.4	5.4	.17	5	E6	4
MAY	30	5433	160	34.0	4.8	.14	4	E5	3
JUN	31	5753	176	32.7	5.0	.15			1
JUL	33	5708	176	32.4	4.8	.15	3	E4	3
AUG	37	6415	160	40.1	4.6	.11	4	GS9	4
SEP									1
1. WORKLOAD USED AS BASIS OF APPRAISAL					4.7	.16			
2. AVERAGE PRODUCTIVITY									
3. MANPOWER ALLOWANCE									
SURVEY WORKLOAD (1) (4.7)					29.38				
AVG PRODUCTIVITY (2) (16.2)					32.6				
AMS CODE: 84/792.20000							581A		



REPORTS (CONTROL SYMBOL)  
CSFOR-76

LINE NO.	LINE NO.
----------	----------

BRANCH	SECTION OR UNIT
Chief Department of Emergency Medicine	Emergency Room

SHEET NO.	LINE NO.
-----------	----------

**LINE 14C)**

**YANOSTICK CODE**

## SECTION A - SUMMARY OF MANPOWER

# VANDERBILT ALLOWANCE COMPUTATION

## SECTION 3 - PERFORMANCE DATA

[illegible]

## Sec. D. Specific Remarks (Cont)

Unlike any other MEDDAC, Darnall's ER also serves as a training program for the Army's only MEDDAC based emergency medicine residency. Further, it is the only fully accredited emergency medicine residency in the military and is one of only eighteen so designated nationwide. It also has the only Physicians' Assistant Fellowship in Emergency Medicine in the entire military and is only one of two nationwide. As such, it must provide "state of the art" emergency care for their training. This same training inevitably impedes patient flow thus further taxing the staff.

In summary, there is no other MEDDAC emergency room with which to compare Darnall's in terms of patient complexity, severity of illness nor is there another MEDDAC with an active emergency medicine residency and PA fellowship in emergency medicine.

The administrative functioning of the emergency room is performed by a physician (Director, Emergency Room), a registered nurse (Head Nurse, Emergency Room) and an NCO (NCOIC, Emergency Room). The physician director also performs direct patient care and has training responsibilities to the residency and other areas of the hospital as listed below.

Patient care staffing within the emergency room is by four categories of personnel: physicians, nurses, paraprofessionals, and clerical aides/receptionists.

(a) Physicians. The physicians assigned to the emergency room function in direct patient care, in direct supervision of the patient care rendered by the residents and PAs, in formal instruction, and in administrative functions secondary to the training programs. These tasks are listed below. Many of these tasks are accomplished in what the physicians consider their off-duty time out as a sense of professional responsibility to the residents and PAs and, therefore, are not recorded on the UCA data.

Not addressed in the task list is the fact that two of our physicians are attached to special operations units directly controlled by the Surgeon General and which are on constant alert. These physicians are called at a moments notice to leave their ER responsibilities. Over one hundred man days were lost last year by this department for such activities.

(b) Professional Nurse Staffing: Professional nurses are required to staff two separate and yet interrelated areas: nonurgent acute care and urgent/emergent care. The previous system of nurse triage had to be abandoned, in part, because of inadequate nurse staffing. Triage is now performed by the physicians and more patients are now being treated by these triaging physicians rather than being referred to their clinics. This has already increased the ER workload beyond the usual number of patient visits.

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

b.1 Nonurgent Acute Care. During the day and night shifts one nurse is required for the overall management and rendering of nursing care to the nonurgent patients needing acute care. Two nurses are required for this task during the evening hours because of the increased workload. Fifty percent of the census is seen during the evening shift. The demands of triage and of urgent/emergent care upon the nurse assigned to those areas usually obviate them from participating in nonurgent care. Conversely, nurses abandoning nonurgent acute care as is presently too often the case when resuscitations are underway provides inadequate coverage to nonurgent patients.

b.2 Urgent/Emergent Care. In any given time, one or more patients may be present who qualify as requiring "resuscitation" as defined by Current Procedural Terminology (see appendix A). The relatively large number of patients in this category is the result of two factors. First, the large number of active duty troops and their dependents give rise to a large number of seriously ill and injured patients. This is compounded by the ever increasing retired population which settles in the area. Second, because the nearest tertiary health care facility is over 30 miles away, DACH cares for 90 civilians a year with immediate life-threatening illnesses or injuries most of which are traumatic.

Such patients require constant "one-on-one" registered nurse care by definition. Resuscitation Evaluation sheets completed during the last year submitted to the Quality Assurance Committee document inadequate RN staffing, especially at nights when only one nurse is available.

Additional factors affecting professional nurse staffing include: (a) Training Programs. The professional nursing staff has important training/teaching responsibility for numerous programs. With an emergency residency training program, the head nurse is actively involved in the orientation of these physicians and participants in morning teaching rounds. Present staffing allows the head nurse to attend those morning rounds about 1/12 of the time which negatively impacts on integrated patient care and auditing of patient care by both residents and nursing staff. The staff nurses are responsible for the orientation of residents on the evening/night shifts. Resident rotations outside of DACH require this to be done monthly.

Closely associated with the ER residency program is the training of the 4th year medical students. A PA Fellowship in emergency medicine has been indicated. Again these groups of students require orientation by professional nurses regarding patient care, resuscitation equipment, and ER paper work.

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

Inherent in the above teaching programs is an increase in length of patient stay due to teaching and consultation time. In order to accurately and safely monitor these patients who stay in the ER for longer periods of time an increase of professional nursing staff is required.

The nurses are responsible for the training of several groups of paraprofessional personnel. These groups include 91A students, Special Forces Medics, Medical Proficiency Training (MPT) for 91As and 91Bs from the 4th Airborne Units on post and nursing students from Central Texas College. Orienting and teaching this large number of students places a continuous demand on all assigned emergency room personnel. All nurses assist in a 40-hour orientation program for MPTs and other personnel for training and are responsible to assist these students in mastering ER skills. Shortage of permanent party, complexity of ER equipment, layout of ER (2 separate halls and 2 separate litter bays, see appendix B) and number of students all contribute to less than adequate learning environment. The number of students, complexity of equipment, and ER layout will not change, but an increase in nursing staff would positively affect the present learning environment.

**b.3 Patient Care.** The ER nurse must possess a large number of complex skills in order to provide safe patient care. Dysrhythmia recognition with associated drug therapy, airway maintenance, CPR team management, blood gas skills with interpretation, assessment/triage skills, respiratory treatments for asthmatic patients and intravenous techniques are a few of the abilities which the ER nurse must possess. The increase orientation time to master these skills results in increased staffing requirements. Also to achieve these skills slots have been made available for 1-2 nurses to attend the Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS) course each requiring a minimum of one week away from the emergency room for these courses.

Admission of a patient from the ER to a ward also demands a large amount of the ER nurses time. Presently the average admission rate is 8%. Average admission time minus diagnostic work-up is 30 minutes. In the interest of continuity of care, an initial emergency nurses note with phone call to ward nurse is done on all patients. To assist the wards with their work loads and to maximize patient safety admission lab work and IVs are done on all admitted patients from the ER.

The head nurse audits 10-15% of all patient charts as part of quality assurance program. All staff nurses are included in a resuscitation audit to evaluate the performance of the team during resuscitations. See Appendix B for numbers of medication and respiratory updraft treatments.

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

b.4 Patient Education. The JCAH requires discharge instructions be given to all patients. With present staffing, discharge teaching is sporadic at best. Increased professional nursing staff is necessary in order to teach and verify patients level of understanding regarding his follow-up care.

b.5 Equipment. Emergency equipment has increased in complexity during the past year and results in an increased professional staffing requirement. Items such as the cardiopulmonary thumper computerized EKGs, cardiac monitors, autotransfusers, and Dinamap trend recorder required increased nursing time to maintain proficiency. Additionally, an increased amount of nursing time is needed to orient new personnel in the use of this equipment. The emergency room has also become the poison control center for the Central Texas area.

Telemetry equipment has been installed in the ambulance section. Nurses are often called to take reports from the paramedics in the field and to advise further treatment and advise as to which code to bring the patient to the ER. The nurses find out the estimated time of arrival and notifies the staff doctor and necessary equipment ready for the patient.

(c) Paraprofessional Staffing. During the period of 28 Oct to 24 Nov 85 SF558s and ER nursing notes were audited to ascertain the numbers of tasks performed. An attached time-task listing pertain to paraprofessional staffing is provided.

In considering paraprofessional staffing, two additional factors should be addressed which can not be explained in a time-task format. First, the large turnover of paraprofessional staff leads to inexperienced personnel not being able to complete their tasks as quickly as the minimal essential tasking times would indicate that they should. Second, these inexperienced personnel and their turnover necessitate expenditure of physician, nurse and other paraprofessional time for training the new persons and all too often redoing their tasks. For this latter reason a training NCO should be required for the training of the permanent party with its large turnover, the MPT students who regularly rotate through the ER without previous experience of emergency room work, and to provide for ongoing inservice education.

An additional requirement impacting on current paraprofessional staffing is the requirement to provide a medical attendant for the BAMC patient transport bus. The bus operates 4 days a week and a round trip requires 10 hours.

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

Lastly, the Emergency Room has yet to utilize its sophisticated and expensive "trauma room"; although it was ready for use 24 months ago, there are simply not enough paraprofessional personnel available for someone to stay with critical patients in this room, and the room is out of visual range of the other treatment areas. Not to provide such coverage when a patient would occupy its room would constitute negligence.

(d) Clerical Aides/Receptionist Staffing. The clerical staff are the receptionists who meet the patients and in-process them on SF558a, the ER log and, if sufficient staff is available, into the ER computers. They additionally answer and initiate telephone calls; process laboratory and radiology requests; and order, stock and collate the tens of thousands of forms which monthly emanate from the Emergency Room. These clericals must be of a job grade to permit them to utilize the ER computer(s) for patient data entry. A chronic shortage of such clerical personnel has led to the use of an already understaffed paraprofessional for these functions.

While the manpower tasking study was done in October-November 1985, a simultaneous study was done by shift concerning the clerical support. The results of this tasking is presented below in section 5.

4. Workload. Workload reflected in Section B for the month of September 1985, represents corrected workload. Due to a mathematical error, clinic visits were incorrectly calculated on the MED 302 report. The actual clinic visits for this month were 4577. The monthly average clinic visits during the survey period was 4704. An additional 927 patients were triaged in the ER and referred to other clinics for treatment. Using the four most representative months of the survey period, the workload by shift was broken out as follows:

MONTH	WEEKDAYS			WEEKENDS		
	Days	Evenings	Nights	Days	Evenings	Nights
OCT 84	37	65	20	53	61	24
MAR 85	37	62	18	54	65	22
APR 85	38	69	21	62	67	18
AUG 85	42	67	24	45	68	27
MONTHLY AVERAGE	39	66	21	54	65	23
				Total		
				123		138
				116		140
				128		147
				133		140
				125		141

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

## 5. Time/Task. Time/task data is provided in order for the following:

## a. Physician staff.

Task	Time Required to Perform Task Once (in hours)	No. of Times Performed Monthly	Total Hours Required Per Month
Triage Patients not seen in ER	0.17	600	100
Lecture Preparation & Delivery	12	11	132
AM Report Preparation & Attendance	2.5	30	75
(75 min per day for 2 months)			
Resident Counseling & Written Counseling Statements	1	15	15
Research Coordination & Publication	40	1	40
Chart Review	2	30	60
Prehospital Admin.	3	21	63
Emergency Rm. Admin.	3	21	63
Patient Assistance Responses & Corrective Action	1	4	4
TDY for Training	15	1	15
ACLS Admin/teaching (quarterly function)	38	1	38
ATLS Teaching (semianual)	5	1	5
Tri-Service Symposium	10	1	10
DEM Staff Meetings (biweekly, average 6 persons, 1 hour each)	6	2	12
Wednesday ER Coverage (1 additional person while residents are in lectures)	6	4	24
Other Dept. Meetings, e.g., QA & EMS	6	2	12
		TOTAL	668





Sec. D. Specific Remarks (Cont)	
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[illegible]

**SUBTOTAL**

1277.64

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

W2M5AA

## Sec. D. Specific Remarks (Cont)

## b.3 Night Shift.

Task	Time Required to Perform Task Once (in minutes)	No. of Times Performed Monthly	Total Hours Required Per Month
Resuscitations-assistance to MDs and RNs	90	61.2	91.8
Phlebotomies	3.5	268.8	15.68
ABG & Stat Lab deliveries	7	359.2	41.91
12 lead ECGs	10.5	96.5	16.89
Assist consulting MDs	10	110	18.33
Vital signs	2.5	733.2	30.55
OSVS	5.5	133.5	12.24
ECG monitor/rhythm strip	3	92.2	4.61
Transport to x-ray	8	189.4	25.25
Accompanied in x-ray	45	47.4	35.55
NGT/OGT placement	8	12.9	1.72
NGT/OGT lavage	30	7.9	3.95
Urinary catheterizations	6.5	30.9	3.35
Pelvic exams	8	88.6	11.81
Sexual assaults	75	2	2.5
Minor wounds-cleansing and dressing	20	48.9	16.3
Simple lacerations	35	46.6	27.18
Intermediate lacerations	50	11.9	9.92
Complex lacerations	65	14.5	15.71
Minor burns	30	8.8	4.4
Poison care	30	12.9	6.45
Crutches with teaching	15	23.7	5.93
Splint application	20	48.3	16.1
Preparing patient care areas	3	733.2	36.66
Restocking-2 persons each 30 mins. per shift	60	30.42	30.42

SUBTOTAL 485.21

TOTAL 2621.35

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

Sec. D. Specific Remarks (Cont)			
c. Clerical Staff (Receptionists).			
Task	Time Required to Perform Task Once (in minutes)	No. of Times Performed Monthly	Total Hours Required Per Month
C.1 Day Shift			
SF 558 & Log-in/computer	3	1328.4	66.42
Radiology requests	1.5	778	19.45
Laboratory requests	1	1209	20.15
Telephone calls	3	2569.1	128.455
Enter new patients into system	5	332.1	27.675
Close out records/shift	30	30.4	15.2
		SUBTOTAL	277.35
c.2 Evening Shift			
SF 558 & Log-in/computer	3	2114.4	105.72
Radiology requests	1.5	1238.3	30.9575
Laboratory requests	1	1984	33.066667
Telephone calls	3	3160.3	158.015
Enter new patients into system	5	528.6	44.05
Close out records/shift	30	30.4	15.2
		SUBTOTAL	387.00917
c.3 Night Shift			
SF 558 & Log-in/computer	3	733.2	36.66
Radiology requests	1.5	429.4	10.735
Laboratory requests	1	744	12.4
Telephone calls	3	1091.7	54.585
Enter new patients into system	5	183.3	15.275
Close out records/shift	30	30.4	15.2
Order, collate and stock all ER forms	90	10	15
		SUBTOTAL	159.855
		TOTAL	824.22

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

## 6. Recommended Staffing

a. Physicians Staff: Based on a daily bed occupancy rate of 172, six (6) physician requirements should be recognized. Additional four (4) physicians are required to provide educational support to the residency. Fellowship as shown by the time/tasking for their roles shown above. This requires a total of 10 physicians.

b. Professional Staff: In light of the discussion of professional nurse staffing for the two interrelated areas, the ER, i.e., nonurgent acute care and urgent/emergency care, the following should be considered in guidelines:

RN Staffing Area		Days	Evenings	Nights
Nonurgent Acute Care	1	2	1	
Urgent/Emergent Care	1	1	1	1
TOTALS:	2	3	2	2

Based on this data the following staffing pattern is needed:

SHIFT	MON-FRI	SAT, SUN, & HOL								
Days	2*	2								
Evenings	3	3								
Nights	2	2								
	7	7								
DAYS + EVENINGS										
2	+	3	+	2	=	7	X	21 X 8 (hr/shift)=	1176	
Weekdays	2	+	3	+	2	=	7	9.4 X 8 (hr/shift)=	526.40	
Weekends	2	+	3	+	2	=	7	1702.40		

\*Does not include Head Nurse

1702.4 divided by 145 hrs/mo = 11.74 or 12 requirements

Schedule D (Sheet 12 Line 4) - Continuation Sheet

Sec. D. Specific Remarks (Cont)

c. Paraprofessional Staff. Based on the time tasking above for paraprofessionals the following staffing pattern is needed:

SHIFT	MON-FRI	SAT, SUN, & HOL	
Days	* 7	6	*Does not include NCOIC
Evenings	9	9	Does include attendant for
Nights	3	3	BAMC bus
	19	18	
DAYS + EVENINGS + NIGHTS = TOTAL	DAY/MO	HR	
Weekdays 7 + 9 + 3 = 19	X 21 X 8(hr/shift) =	3192	
Weekends 6 + 9 + 3 = 18	X 9.4X 8(hr/shift) =	1353.6	
4545.6 divided by 145 hrs/mo=31.3 or 31 requirements			

d. Clerical Staff (Receptionist). Based on the time tasking above for the clerical staff (receptionists) the following staffing pattern is needed:

DAYS + EVENINGS + NIGHTS = TOTAL	DAY/MO	HR
Weekdays 2 + 3 + 1 = 6	X 21 X 8(hr/shift) =	1008
Weekends 2 + 3 + 1 = 6	X 9.4X 8(hr/shift) =	451.2
1459.2 divided by 145 hrs/mo = 10.063 or 10 requirements		1459.2

## Schedule D (Sheet 12 Line 4) - Continuation Sheet

## Sec. D. Specific Remarks (Cont)

7. Staffing Requirements		
1	Off (MC)	Director, Emergency Room and ER Staff Physician
1	Off (MC)	Director, Pre-hospital Care and ER Staff Physician
8	Off (MC)	Staff Physicians
13	Off (MC)	Emergency Residents - training
1	Off (MC)	Head Nurse, Emergency Room
5	Off (MC)	Professional Nurses
1	Enl	NCOLC, Emergency Room
11	Enl	Practical Nurses
15	Enl	Medical Specialists
6	Civ	Professional Nurses
5	Civ	LPN/Nursings Assistants
10	Civ	Medical Clerks
77	Subtotal	
"Other Personnel"		
1	Off (MC)	Emergency Resident (USAP) - training
1	Off (ANC)	Professional Nurse (21st EVAC HOSP)
1	Subtotal	
79	Total	

**INSTRUCTIONS:** Starred (\*) information must be answered for each patient. Answer 2-24 only if appropriate to the patient. Questions 2-8 require circling correct number. Questions 9-24 require a checkmark (✓) answer to the left of the question number only if applicable. Each patient must have one of these forms completed. Place completed form in designated box by chart rack. This is an IMPORTANT Survey! Please help one another out in gathering this data.

1) Date \_\_\_\_\_ \*(1a) D E N (Circle Answer) \*(1b) Log Number \_\_\_\_\_  
 \*(1c) Resuscitation Patient (SEE DEFINITION BELOW): Yes No (Circle Answer)  
 Circle Answer)

- |   |   |   |  |
|---|---|---|--|
| 2 | 3 | 4 | (2) Number Updraft Treatments                                      |
| 2 | 3 | 4 | (3) Number IV's successful   |
| 2 | 3 | 4 | (4) Number of phlebotomies for blood                               |
| 2 | 3 | 4 | (5) Number of lab/ABC runs for this patient                        |
| 2 | 3 | 4 | (6) Number of ABC's - successful or unsuccessful                   |
| 2 | 3 | 4 | (7) Number of EKG's performed                                      |
| 2 | 3 | 4 | (8) Number of outside consulting physician visits                  |
| 2 | 3 | 4 | (9) OSVS   |
|   |   |   | (10) On Monitor  |
|   |   |   | (11) Was patient transported to x-ray by ER personnel              |
|   |   |   | (12) Did ER personnel stay with patient in x-ray                   |
|   |   |   | (13) NG/OG tube placement  |
|   |   |   | (14) NG/OG tube lavage   |
|   |   |   | (15) Minor Wounds (Abrasions & lacerations not requiring suturing) |
|   |   |   | (16) Simple Laceration (needing sutures)                           |
|   |   |   | (17) Intermediate lacerations (needing sutures)                    |
|   |   |   | (18) Complex laceration (needing sutures)                          |
|   |   |   | (19) Minor Burns   |
|   |   |   | (20) Urinary Foley Catheterization or In/Out Catheterizations      |
|   |   |   | (21) Pelvic Exam   |
|   |   |   | (22) Sexual Assault Exam   |
|   |   |   | (23) Poison care to include ipecac and charcoal given              |
|   |   |   | (24) Crutches/Crutch teaching                                      |
|   |   |   | (25) Ortho Splints   |

**Definition of Resuscitation/Critical Care patient:**

Critical care includes the care of critically ill patients in a variety of medical or surgical emergencies that require constant and prolonged attention by 2 or more staff personnel. Examples of this are:

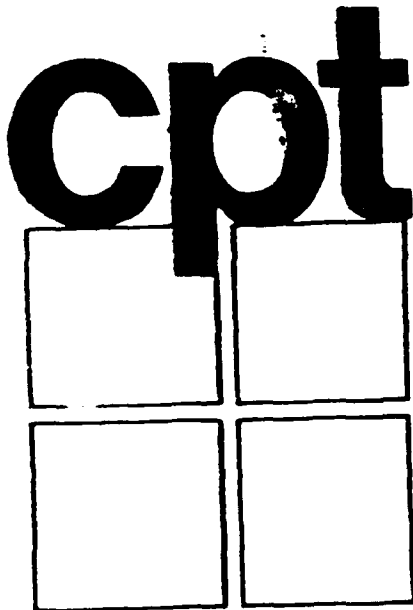
- A. Evaluation of patients with unstable VS; i.e., low/high B.P. + OSVS, etc.
- B. Patient in shock
- C. Altered or changing state of consciousness
- D. Evaluation and management of patient with active seizure or post-ictal state
- E. Status asthmaticus - requiring prolonged personal bedside management.
- F. Respiratory distress
- G. Cardiac Arrest
- H. Trauma Presenting by Ambulance
- I. Penetration Wounds to Chest/Abdomen

SCHEDULE X (S12, 14)

W2N5AA

## PROCEDURAL TERMINOLOGY FOR EMERGENCY MEDICINE (PTM)

Taken from the 4th Edition, *Physicians' Current Procedural Terminology*, including entries from the first seven updates.  
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Published Cooperatively by  
The American College of Emergency Physicians  
and the American Medical Association

Includes material from the first, second, third, fourth, fifth, sixth, and seventh updates to CPT-4

nent physical examination, review and evaluation of past medical data, establishment of a plan of investigative and/or therapeutic management, and the preparation of an appropriate report. An example would be an extensive exam performed at the request of another physician with a written or verbal report.

#### 4. Comprehensive Consultation

90620: This involves an in depth evaluation of a patient with a problem requiring the development and documentation of medical data (the chief complaints, present illness, family history, past medical history, personal history, system review and physical examination, review of all diagnostic tests and procedures that have been done previously), the establishment or verification of a plan for further investigation and/or therapeutic management and the preparation of a report. An example would be a young person with fever, arthritis and anemia needing complete assessment or a comprehensive psychological consultation that may include a detailed history of present illness and past history, a mental status exam, exchange of information with the primary physician or nursing personnel or family members and other informants and the preparation of a report with recommendations.

#### 5. Complex Consultation

90630: This is an uncommonly performed service that involves an in depth evaluation of a critical problem that requires unusual knowledge, skill and the preparation of an appropriate report. An example would be an acute myocardial infarction with major complications.

## CRITICAL CARE

Critical care includes the care of critically ill patients in a variety of medical emergencies that requires the constant and prolonged attention of the physician. The minimum time is one hour of constant care, which represents one hour of care or an accumulation of time throughout the day that will equal one hour. In addition, portions or segments of an hour can be billed with the modifier "-52". The descriptors for critical care are intended to include cardio-pulmonary resuscitation and a variety of services attendant to this procedure as well as other acute emergency situations. Refer to section on critical care for procedure codes (99160 to 99189). Examples of critical care are:

- A. evaluation and management of patient with unstable vital signs
- B. patient in shock
- C. altered or changing state of consciousness (coma)
- D. evaluation and management of patient with active seizure or in post-ictal state
- E. status asthmaticus — requiring prolonged personal bedside management
- F. respiratory distress
- G. cardiac arrest



## SCHEDULE X (S 12, L 4) - Continuation Sheet

## SEC D. SPECIFIC REMARKS (Cont)

## A P P E N D I X B

## Medications Administered By Professional Nurses

	<u>#/Day</u>	<u>Days/Mo</u>	<u>#/Month</u>
Days	8	30.4	243.2
Evenings	8.4	30.4	425.6
Nights	5	30.4	152.0

The above medications list did not include the drugs used during "resuscitation" e.g., D-OW, Narcan and Thiamine for altered mental status or during "codes" and Dr. Piggyback medications such as aminophylline for asthmatics and antibiotics for open wounds or burns.

	<u>Time/Updraft</u>	<u>#/Shift for the Month</u>	<u>Time hrs/Month</u>
Days	10 min	241	40.12
Evenings	10 min	217.7	36.28
Nights	10 min	103.8	17.3

# MANPOWER SURVEY REPORT - REMARKS

For use of this form, see AR 570-4; the proponent agency is DCSPER.

1 SHEET NO.	2 LINE NO.	REPORTS (CONTROL SYMBOL)
12	4	DD FORM 140-1, 1 DEC 73

1 CHECK APPLICABLE BLOCK: ☒ SURVEY TEAM GENERAL REMARKS (complete item 4, only, and file after Commander's General Remarks.)

☐ COMMANDER GENERAL REMARKS (complete item 4, only, and file after Coversheet, DA Form 140.)

☒ SURVEY TEAM SPECIFIC REMARKS (If this block is checked, complete items 1, 2, and 4 and file with Schedule X.)

4 REMARKS: If more space is required, continue on plain paper 10 1/2" x 8".

- The functions indicated on this schedule were reviewed and found to be as stated.
- The information in Section B was reviewed, found to be invalid, and was not considered in determining manpower requirements because it could not be verified from clinic records.

Based on work load distributions reflected in Section D of the Schedule X plus data verified from clinic sources, the survey team determined the following to be representative work loads for this work center. Visits by shift for duty days and for weekends and holidays were:

## WEEKENDS AND HOLIDAYS

### DUTY DAYS

Days	Evening	Nights	Days	Evenings	Nights
40.4	68.5	21.7	48.6	67.9	25/1

Average number of visits per month, determined from clinic records and from information in Section D was determined to be 4100 clinic visits per month.

- Yardstick Code 557-55 was applicable to this activity and was used in conjunction with local appraisal to determine minimum essential manpower requirements.

(1) Yardstick Code 557-55:  $23 + 4.67 (4.1-3.0) = 28.14$  or 28 requirements.  
Work Unit: Clinic visits (thousands) (4.100)

**Manpower Survey Report Sheet 12 Line 4**  
**Survey Team Remarks (continued)**

(2) Local Appraisal: Plus 9 requirements.  
Rationale: The survey team recommended 9 requirements over the yardstick yield to facilitate the following staffing patterns for nursing professional and paraprofessional, and clerical staffing:

**(a) Professional Staffing:**

	Staffing Per Shift		Total Staff	Days/Mo	Hrs	Total Man-hours
	Day	Evening Night				
Weekdays	2	3 + 1	= 6	x 21	x 8	= 1008.0
Weekends, Holidays	2	3 + 1	= 6	x 9.4	x 8	= 451.2
					Total	<u>1451.2</u>

**1459.2 Man-hours**  
**145 hrs/mo Army Availability Factor = 10.1 or 10 requirements.**

**(b) Para-professional Staffing:**

	<u>Staffing Per Shift</u>				<u>Total Staff</u>	<u>Days/Mo</u>	<u>Hrs</u>	<u>Total Man-hours</u>			
	<u>Day</u>	<u>Evening</u>	<u>Night</u>								
Weekdays	4	+	5	+	3	=	12	x	21	=	2016.0
Weekends, Holidays	4	+	5	+	3	=	12	x	9.4	x	902.4
									Total		2918.4

2918.4 Man-hours  
145 hrs/mo Army Availability Factor = 20.13 or 20 requirements.

Manpower Survey Report Sheet 12 Line 4  
Survey Team Remarks (continued)

(c) Clerical Staffing:

	Staffing Per Shift			Total Staff	Days/MO	Hrs	Total Man-hours
	Day	Evening	Night				
Weekdays	1	+	1	=	3	x 21	= 504.0
Weekends,							
Holidays	1	+	1	=	3	x 9.4	= 225.6
						Total	729.6

729.6 Man-hours  
145 Hrs/mo Army Availability Factor = 5.03 or 5 requirements.

(d) Two requirements were staffed for supervision and administration as listed below:

Head Nurse	1
NCOIC	1
Total	<u>2 requirements</u>

(e) Recapitulation: Shift staffing plus supervision

Staff nurses	10 requirements
Paraprofessionals	20 requirements
Clerical	5 requirements
Supervision	2 requirements
Total	<u>37 requirements</u>
Minus yardstick yield	28 requirements
Local appraisal	<u>+9 requirements</u>

Manpower Survey Report Sheet 12 Line 4  
Survey Team Remarks (continued)

(3) Local Appraisal: Plus 2 requirements.  
Rationale:

(a) The survey team recommended one clerk data transcriber to enter patients into the Emergency Room computer. Requirement was based on a requirement to enter an average of 4100 patients per month into the system at 2 minutes per data entry:  $4100 \times 2 \text{ mins} = 60 \text{ min/hr} = 136.67 \text{ hr/mo.}$

136.67 hours/month

145 availability factor = 0.94 or 1 requirement

(b) One emergency treatment NCO was recommended to staff the DACH - BAMC patient transport bus. Requirement was based on 4 trips per week at 10 hours per trip  $\times 4.3 \text{ weeks/month} = 17.2 \text{ trips/month} \times 10 \text{ hours} = 172 \text{ hours/month.}$

172 hours/month

145 availability factor = 1.19 or 1 requirement.

(4) Local Appraisal: Plus 7 requirements.

Rationale: The survey team recognized requirements for seven emergency physicians, based on correspondence from the Commanding General, US Army Health Services Command to the Office of the Surgeon General, dated 23 August 1982, which provided criteria for physician and physician assistant staffing in Emergency Treatment Centers (ETC) at all MTF subordinate to Health Services Command.

(5) Local Appraisal: 15 requirements.

Rationale: Fifteen emergency medicine resident requirements were recognized in accordance with the OTSG Jul 85 FYGME listing of Emergency Medicine Residents for Darnall Army Community Hospital.

Manpower Survey Report Sheet 12 Line 4  
Survey Team Remarks (continued)

(6) Summary:

Paragraph c (1)	Yardstick Yield	28 requirements
c (2)	Local Appraisal	9 requirements
c (3)	Local Appraisal	2 requirements
c (4)	Local Appraisal	7 requirements
c (5)	Local Appraisal	15 requirements
	Total	<u>61</u> requirements

(7) Total Yield: 61 requirements.

- d. The commander's remarks, Section D, were found to be essentially as stated.
- e. The survey team recommended staffing as indicated below:

7	OFF (MC)	Emergency Physician
14	OFF (MC)	Emergency Physician (Resident)
1	OFF (AN)	Med Sur Nurse (Clinical Head Nurse)
5	OFF (AN)	Med Surg Nurse (Clinical Staff Nurse)
1	ENL	Emergency Treatment NCO (NCOIC)
2	ENL	Practical Nurse
11	ENL	Emergency Treatment NCO
3	ENL	Medical Specialist
4	CIV	Med Surg Nurse (Clinical Nurse)
5	CIV	LPN/NA
5	CIV	Medical Clerk/Clinic Receptionist
1	CIV	Medical Clerk Data Transcriber

59 Subtotal

Manpower Survey Report Sheet 12 Line 4  
Survey Team Remarks (continued)

"Other" Manpower

1	OFF (MC)	Emergency Physicians (Resident) (USAF)
<u>1</u>	<u>OFF (AN)</u>	<u>Med Surg Nurse (Clinical Staff Nurse) (21st Evac Hosp)</u>

2 Subtotal

==

61 Total

MANPOWER SURVEY REPORT - SCHEDULE X - MANPOWER AND WORKLOAD DATA									
For use of this form, see AR 570-4, the proponent agency is the Office of the Assistant Chief of Staff for Force Development.									
MAJOR STAFF ELEMENT		DIVISION		BRANCH		SECTION OR UNIT		SHEET NO. LINE NO.	
MEDDAC, Fort Hood		Dept of PCCM		General Outpatient Clinic				5 13	
DESCRIPTION OF WORK PERFORMED									
Yardstick Code 557-52.4 is applicable to this function.									
YARDSTICK CODE									
557-52.4									
WORK UNIT									
Clinic Visits									
YARDSTICK ALLOWANCE COMPUTATION									
See Survey Team Specific Remarks									
SECTION B - PERFORMANCE DATA									
YEAR AND MONTH	AVG STR	TOTAL MAN-HOURS WORKED	HRS OP MO	EQUIV MONTHS (c + d)	NO. OF WORK UNITS	W/L PERSON (f + g)			
19 84/85	21	3228	176	18.3	4859	266			
OCT	22	2878	160	18.0	3983	221			
NOV	22	2875	160	18.0	3929	218			
DEC	22	3543	176	20.1	5167	257			
JAN	22	2937	152	19.3	4594	238			
FEB	22	3134	168	18.7	4754	254			
MAR	19	2891	176	16.4	4857	296			
APR	22	3344	176	19.0	5403	284			
MAY	24	3493	160	21.8	5017	230			
JUN	21	3048	176	17.3	5526	319			
JUL	26	3923	176	22.3	6306	283			
AUG	27	3874	160	24.2	6000	248			
SEP									
1. WORKLOAD USED AS BASIS OF APPRAISAL						5033			
2. AVERAGE PRODUCTIVITY						284			
3. MANPOWER ALLOWANCE									
SURVEY WORKLOAD (1) ( 5033 )						17.72 <sub>1.11</sub> = 19.67 or 20			
AVG PRODUCTIVITY (2) ( 284 )									



SCHEDULE X (S 5, L 13) - Continuation Sheet

W2M5AA

SEC D. SPECIFIC REMARKS (Cont)

follow-up of chronically ill patients in the GOC. Currently 30% of the patients seen in the GOC fall in this category. This increases the time required for each appointment and impacts directly on the scheduling practices of this clinic. The implementation of TRIPAS has impacted on the clerical requirements of this clinic. All patients seen in the clinic must be entered into the computer. All appointments must be checked and assigned to the correct care provider. All no-shows must be annotated. At the end of the day, the clerk must reconcile the system to close out the days records. The additional work requirements of the TRIPAS system has added substantially to the clerical workload of this clinic. Due to the significant increase in workload since Same Day Appointments were instituted, number used for the time/task workload reflect a three month average from July - September.

5. TIME/TASK:

TASK	TIME REQUIRED TO PERFORM TASK ONCE	NO. OF TIMES PERFORMED MONTHLY	TOTAL HOURS REQUIRED PER MONTH
a. Physicians			
(1) Day Clinic Appts	.25 hr	4191	1047.75
(2) Evening Clinic Apts	.17 hr	1055	175.8
(3) Weekend/Holiday Clinic	.17 hr	697	116.2
(4) Morning Report for all Physicians	.30 hr	21	126.0
(5) Weekly CME for all Physicians	1.00 hr	4	52.0
		TOTAL	1517.75

W2M5AA

SCHEDULE X (S 5, L 13) - Continuation Sheet

SEC D. SPECIFIC REMARKS (Cont)

TASK	TIME REQUIRED TO PERFORM TASK ONCE	NO. OF TIMES PERFORMED MONTHLY	TOTAL HOURS REQUIRED PER MONTH
b. Paraprofessional			
(1) Errands			
(a) Lab	.25 hr	150	37.5
(b) Pharmacy	.25 hr	15	3.75
(c) X-Ray	.25 hr	45	11.25
(d) Record Section	.25 hr	60	15.0
(e) Dept of Nurs	.33 hr	30	10.0
(f) Distribution	.33 hr	30	10.0
(g) Audits	.50 hr	30	15.0
(h) Screening Patients	.08 hr	5944	495.3
(i) Pelvics (20/day)	.25 hr	600	150.0
(j) Chaparone (20/day)	.17 hr	600	100.0
(k) Obtaining care provider (Record for routine appt sorting and tagging)	.50 hr	30	15.0

SCHEDULE X (S 5, L 13) - Continuation Sheet

W2M5AA

SEC D. SPECIFIC REMARKS (Cont)

TASK	TIME REQUIRED TO PERFORM TASK ONCE	NO. OF TIMES PERFORMED MONTHLY	TOTAL HOURS REQUIRED PER MONTH
Paraprofessional continued			
(l) MIDS	.33 hr	30	10.0
(m) CMS	.33 hr	30	10.0
(n) Stocking Dressing Rms	.50 hr	30	15.0
(o) Stocking Pelvic & Rx Rm	.50 hr	30	15.0
(p) Ordering care providers Lab	.05 hr (50qd)	150	75.0
(q) Telephone calls to pts	.50 hr	30	15.0
(r) Ordering supplies and forms	1.50 hr	4	6.0
(s) Escort Patient to other areas	.17 hr	60	10.0
(t) Inservice	.50 hr	2	1.0
(u) Staff Briefing	.25 hr	30	7.5
(v) Reports	.33 hr	30	10.0

SCHEDULE X (S 5, L 13) - Continuation Sheet

W2M5AA

SEC D. SPECIFIC REMARKS (Cont)

<u>TASK</u>	<u>TIME REQUIRED TO PERFORM TASK ONCE</u>	<u>NO. OF TIMES PERFORMED MONTHLY</u>	<u>TOTAL HOURS REQUIRED PER MONTH</u>
Paraprofessional continued			
(w) Patient questions and complaints	1.00 hr	30	30.0
(x) Separating and distributing Lab Slips	.25 hr	60	15.0
			<u>15.0</u>
		TOTAL	1082.3
c. Clerical Tasks			
(1) Receptionist			
(a) Logging in Patients and appointments	.05 hr	5944	297.2
(b) Patient registration on TRIPAS	.08 hr	180	15.0
(c) Making and cancelling appts	.05 hr	750	37.5
(d) Telephone Calls	.05 hr	2250	112.5
(e) Ordering Lab work	.05 hr	1500	75.0

SCHEDULE X (S 5, L 13) - Continuation Sheet

W2M5AA

SEC D. SPECIFIC REMARKS (Cont)

<u>TASK</u>	<u>TIME REQUIRED TO PERFORM TASK ONCE</u>	<u>NO. OF TIMES PERFORMED MONTHLY</u>	<u>TOTAL HOURS REQUIRED PER MONTH</u>
Clerical continued			
(f) Make temp records	.05 hr	450	15.0
(g) Directing patient and family	.05 hr	4500	22.5
(h) Make appt at other hospitals	.50 hr	4	2.0
(i) Closing out daily records	.50 hr	30	15.0
(j) Sorting and returning Medical Records	.50 hr	30	15.0
(k) Escorting Patients	.01 hr	5944	99.1
		TOTAL	705.8

SCHEDULE X (S 5, L 13) - Continuation Sheet

SEC D. SPECIFIC REMARKS (Cont)

6. RECOMMENDED STAFFING:

a. Physician	Weekdays	Weekends	Holidays
0730-1630	10		
1330-2200	2	2	
1200-2130			2
0800-1630			
Weekdays	12 x 21 x 8 = 2016		
Weekends/Holidays	2 x 9.4 x 8 = 150.4		
	2166.4 -- 145 = 14.94 or 15 requirements		
b. Paraprofessional			
0730-1630	5*		
1330-2200	3	3	
1200-2130			3
0800-1630			
*Does not include HN or NCOIC			
Weekdays	8 x 21 x 8 = 1344		
Weekends/Holidays	2 x 9.4 x 8 = 225.4		
	1569.6 -- 145 = 10.68 or 11 requirements		

SCHEDULE X (S 5, L 13) - Continuation Sheet

SEC D. SPECIFIC REMARKS (Cont)

c. Clerical				
0730-1630	2			
1330-2200	1			
1200-2130				1
0800-1630				
Weekdays		3 x 21 x 8 = 504		
Weekend/Holidays		1 x 9.4 x 8 = 75.2		
			654.4 ~ 145 = 4.51 or 5	requirements

7. STAFFING REQUIREMENTS:

1 OFF (MC)	Chief, General Outpatient Clinic
13 OFF (MC)	General Medical Officers
1 ENL	Clinic NCO
6 ENL	Medical Specialists
1 CIV	General Medical Officer
4 CIV	Vocational Nurses
1 CIV	Nursing Assistant
5 CIV	Medical Receptionists
32 Subtotal	
	Other Personnel
1 OFF (AN)	Clinical Head Nurse (21st Evac)
33 TOTAL	

SEC D. SPECIFIC REMARKS (Cont)

APPENDIX A

	MONTHLY TOTAL	DAILY	EVENING	WEEKEND/HOLIDAY
Oct-84	4859	3539	766	554
Nov	3983	2641	683	659
Dec	3929	2712	632	585
Jan-85	5167	3733	873	561
Feb	4594	3206	755	633
Mar	4754	3398	710	646
Apr	4857	3672	724	461
May	5403	3827	966	610
Jun	5017	3543	862	612
Jul	5526	3598	1204	724
Aug	6306	4556	1102	648
Sep	6000	4420	860	720
Monthly Average	5033	3570	845	618
Jul - Sep Monthly Average	5944	4191	1055	697



<b>MANPOWER SURVEY REPORT - REMARKS</b> <small>For use of this form, see AR 570-4; the proponent agency is DCSPER.</small>		1. SHEET NO. <div style="border: 1px solid black; padding: 2px; width: 30px; margin: 0 auto;">5</div>	2. LINE NO. <div style="border: 1px solid black; padding: 2px; width: 30px; margin: 0 auto;">13</div>	REPORTS CONTROL SYMBOL <div style="border: 1px solid black; padding: 2px; width: 50px; margin: 0 auto;"> </div>
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☐ CHECK APPLICABLE BLOCK: ☐ SURVEY TEAM GENERAL REMARKS (complete item 4, only, and file after Commander's General Remarks.)

☐ COMMANDER GENERAL REMARKS (complete item 4, only, and file after Coversheet, DA Form 140.)

☒ SURVEY TEAM SPECIFIC REMARKS (If this block is checked, complete items 1, 2, and 4 and file with Schedule X.)

REMARKS (If more space is required, continue on plain paper 10 1/2" x 8".)

a. The functions indicated on this schedule were reviewed and found to be as stated.

b. The information in Section B was reviewed, found to be valid, but was not considered in determining manpower requirements because examination of clinic records for the most recent four months available showed that the frequency pattern of patient visits had changed as follows:

Normal duty hours	M-F	0730 - 1630	- Avg - 4249 visits/month
Evenings	M-F	1630 - 2130	- Avg - 416 visits/month
Weekends and Holidays:		Avg - 719 visits/month	
	Saturday	- 0800 - 1640	
	Sundays/Holidays	- 1200 - 2030	

Total Average Monthly Workload

5384 visits/month

The survey team used the yardstick in conjunction with local appraisal to derive staffing recommendations for clinic operations during normal duty hours, and used local appraisal to recommend staffing for extended hours.

c. Yardstick Code 557-52.4 was applicable to this activity and was used in conjunction with local appraisal to determine minimum essential manpower requirements.

(1) Yardstick Code 557-52.4:  $13 + 2.18(4.249-3.9) = 13.76$  or 14 Requirements.  
 Work Unit: Clinic visits (thousands) (normal duty hours) (4.249).

(2) Local Appraisal: Plus 2 Requirements.

Rationale: Two additional clinic receptionists were recommended to provide coverage in this busy clinic and to interface with the TRIPAS system. Recommended staffing would provide two receptionists during normal duty hours and one receptionist during extended hours on weekdays. Receptionists functions as listed in paragraph 5c, Section D of the Schedule X were valid, but hours required were overstated.

Manpower Survey Report Sheet 5 Line 13  
Survey Team Remarks (continued)

- (3) Local Appraisal: Minus 1 Requirement.  
Rationale: There was no requirement for the clinical staff nurse as included in the yardstick yield. The clinical head nurse was staffed.
- (4) Local Appraisal: Plus 1 Requirement.  
Rationale: The survey team recommended a clinic NCOIC to provide overall supervision of all clinic operations, prepare schedules and recurring reports and obtain clinic supplies.
- (5) Local Appraisal: Plus 2 Requirements.  
Rationale: The survey team recommended two additional physician requirements for extended shifts (evenings, weekends and holidays). Staffing was based on a requirement for one physician to see and treat an average of 20 patients per day during extended duty hours (1630 - 2130) and a requirement for two physicians to see and treat an average of 76 patients per day on weekend days and holidays.

COMPUTATION:

$$\begin{aligned} 1 \times 21 \times 5 \text{ hrs/day} &= 105 \text{ hrs/month} \\ 2 \times 9.4 \times 8 \text{ hrs/day} &= \underline{150.4 \text{ hrs/month}} \\ \text{TOTAL} & 255.4 \text{ hrs/month} \end{aligned}$$

$$\begin{aligned} 255.4 \text{ hrs/month} \\ \underline{145 \text{ available hrs/month}} &= 1.76 \text{ or } 2 \text{ Requirements.} \end{aligned}$$

- (6) Local Appraisal: Plus 4 Requirements.  
Rationale: The survey team recommended four nursing paraprofessional requirements to provide support to physicians during extended clinic hours on weekdays and on weekends and holidays. Staffing recommendation was based on a requirement for two paraprofessionals during extended hours on duty days and four paraprofessionals on weekends and holidays. Paraprofessionals also perform reception desk functions on weekends and holidays.

Manpower Survey Report Sheet 5 Line 13  
Survey Team Remarks (continued)

COMPUTATION:

2 x 21 days/mo x 5 hrs/day = 210.0 hrs/month  
 4 x 9.4 days/mo x 8 hrs/day = 300.8 hrs/month  
 TOTAL 510.8 hrs/month

510.8 hrs/month  
145 available hours = 3.52 or 4 Requirements.

(7) Local Appraisal: Plus 1 Requirement.

Rationale: The survey team recommended one additional physician requirement to compensate for man-hours expended by each physician for morning report and CME, as detailed in the Schedule X.

Physicians recommended in yardstick yield:	6
Physicians recommended by local appraisal: Para C(5)	<u>2</u>
TOTAL	8

8 Physicians x 10.6 hrs/month/physician for reports & CME = 84.8 hrs/month.

84.8 hrs/month

145 available hours = 0.58 or 1 Requirement.

(8) Summary:

Paragraph C(1)	Yardstick Yield	14 Requirements
Paragraph C(2)	Local Appraisal	+ 2 Requirements
Paragraph C(3)	Local Appraisal	- 1 Requirement
Paragraph C(4)	Local Appraisal	+ 1 Requirement
Paragraph C(5)	Local Appraisal	+ 2 Requirements
Paragraph C(6)	Local Appraisal	+ 4 Requirements
Paragraph C(7)	Local Appraisal	+ 1 Requirement
NET TOTAL		23 Requirements

Manpower Survey Report Sheet 5 Line 13  
Survey Team Remarks (continued)

(9) Total Yield: 23 Requirements.

d. The commander's remarks, Section D, were found to be essentially as stated except that workload patterns had changed as reflected in paragraph b above.

e. The survey team recommended staffing as indicated below:

8	OFF (MC)	General Medical Officer
1	ENL	Medical NCO (NCOIC)
5	ENL	Medical Specialist
1	CIV	GMO
4	CIV	LPN/NA
3	CIV	Medical Clerk Typist/Receptionist

22 SUB TOTAL

"OTHER" Requirements

1	OFF (AN)	Med Surg Head Nurse (21st EVAC Hosp)
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23 TOTAL

## Appendix E

### Definitions

Assigned: The number of personnel actually working in a work center.

Authorization: The number of funded personnel positions allocated to a command.

Clinic Visit: An outpatient visit to a separately organized clinic or specialty service made by patients who have not been admitted.

Emergent: A condition which requires immediate medical attention and for which delay is harmful to the patient; such a disorder is acute and potentially threatens life or function.

Man-month: The total number of hours worked divided by the number of operational hours in the month.

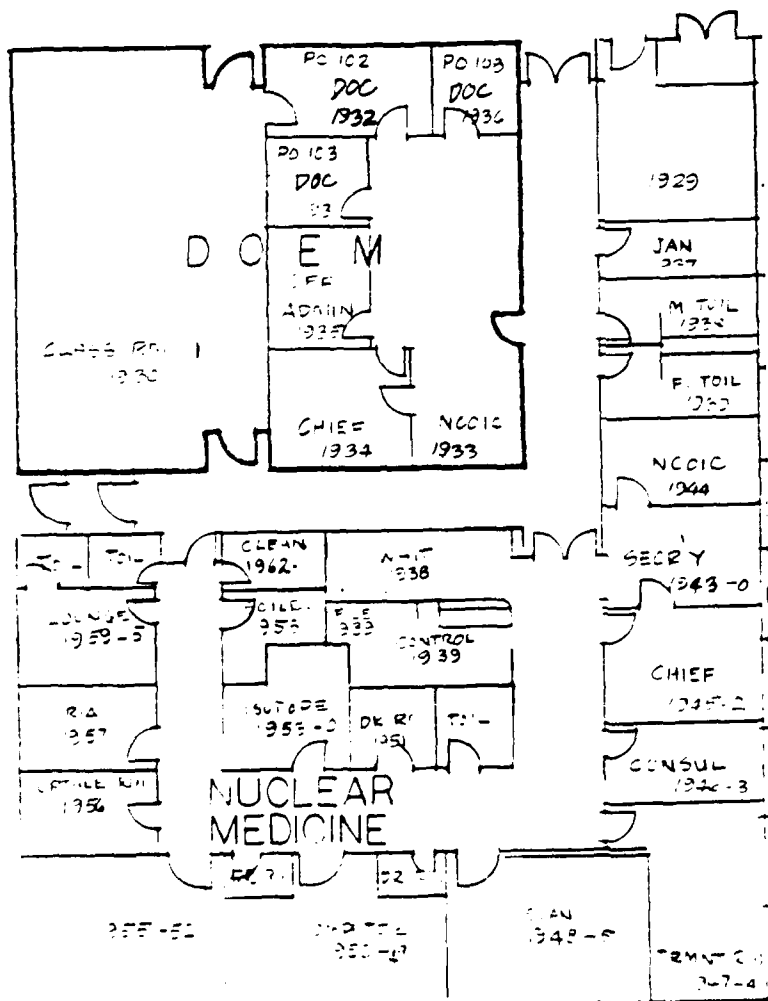
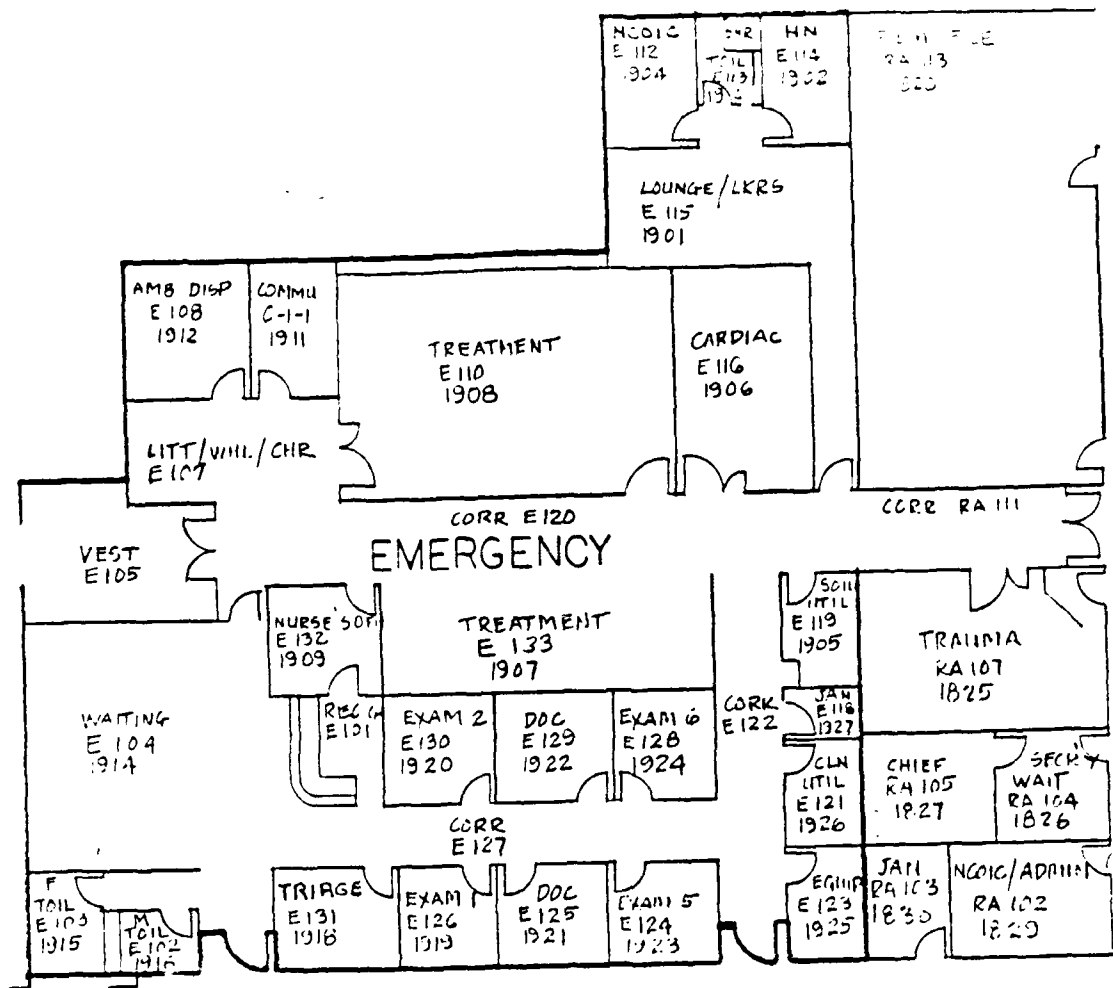
Nonurgent: A condition which does not require the immediate resources of an emergency medical services system; such a disorder is minor or non-acute.

Requirement: The number of positions recognized by a manpower survey needed to perform the authorized duties in a work center.

Triage: Initial assessment of patients to determine the urgency of medical care required.

Urgent: A condition which requires medical attention within a few hours or danger can ensue; such a disorder is acute but not necessarily severe.

Appendix F  
Emergency Room Floor Plan



Appendix G

Staffing Yardsticks, DA PAM 570-557

1. Emergency, Table 557-55
2. General Outpatient, Table 557-52.4



port of medical processing at Reception Stations and Personnel Centers. This requirement will be determined by local appraisal. Workload in terms of physical screenings and limited examinations performed monthly will be recorded separately on Schedule X.

a X-ray specialist will be considered by local appraisal, when facilities and equipment exist in the work center.

Note. Where staffing of more than one medical officer is indicated, warrant officer, Military Physician's Assistant, MOS 911A, may be substituted for 2nd and 3rd positions.

★Table 557-54: Aviation Medicine

**Work Performed.** Provides specialized aviation medical support to the installation and geographical area as required. Provides outpatient health care to all aviation personnel (pilots, crews and maintenance personnel), and to their family members. Participates in the aviation safety and accident investigation program. Conducts all medical examinations for flying duty. Provides aeromedical staff advice, aeromedical education, and participates in the flying mission of the aviation activity. Insures accomplishment of proper administrative actions in all cases involving change in flying status for medical reason.

Yardstick\*

Military Positions				Position Delineation	Civilian Positions	
Line	Duty Position Title	BR	Code MOS Grade		Job title	Code
1	FLIGHT SURGEON	MC	61N MAJ/CPT	C	MED OFF (AVIATION MED)	GS-0602
2	DISPENSARY SP	..	91B20 E5	C	NURSING ASSISTANT	GS-0621
3	DISPENSARY SP	..	91B10 E4	C	NURSING ASSISTANT	GS-0621
4	PATIENT ADMIN SP	..	71G10 E4	C	MEDICAL CLERK	GS-0679
5	DISPENSARY SP	..	91B10 E3	C	NURSING ASSISTANT	GS-0621
6	CLERK TYPIST	..	71L10 E3	C	CLERK TYPIST	GS-0322

\*Manpower requirement will be determined by local appraisal. Positions shown above indicate the type of personnel that may be required.

Note. To permit development of a yardstick, the number of aviation personnel served (pilots, crews, and maintenance personnel) and number of clinics visits will be recorded on Schedule X.

★Table 557-55: Emergency

**Work Performed.** Provides emergency medical care to acutely ill or injured persons, with disposition to the proper facility or service for followup care. Assists with the triage of nonemergency cases to the proper health care service.

		Clinic visits (thousands)* .....				2.0	3.0	4.5	6.0
Yardstick		Manpower requirement** .....				18	23	30	35
		Interval rate .....				5.0	4.67	3.33	
Military Positions				Position Delineation	Civilian Positions				
Line	Duty Position Title	BR	Code MOS Grade		Number of Positions				Job title Code
1	GENERAL MEDICAL OFFICER <sup>a</sup>	MC	60E/62A <sup>b</sup>	C	..	..	..	..	MED OFF (GENERAL) GS-0602
2	CLINICAL HEAD NURSE	AN	66H/J MAJ/CPT	C	1	1	1	1	SUPV CLINICAL NURSE GS-0610
3	CLINICAL NURSE	AN	66H/J CPT/LT	C	4	4	5	5	CLINICAL NURSE GS-0610
4	EMER TMNT NCO	NC	91B30 E6	C	5	7	9	11	NURSING ASSISTANT GS-0621
5	DISPENSARY SP	..	91B20 E5	C	4	6	8	10	NURSING ASSISTANT GS-0621
6	DISPENSARY SP	..	91B10 E4	C	3	3	5	5	NURSING ASSISTANT GS-0621
7	CLERK TYPIST	..	71L10 E3	C	1	2	2	3	CLERK TYPIST GS-0322

\*Emergency clinic visits during the calendar month as reported on the Medical Summary Report, MED-302.

\*\*Does not include physician requirements which will be determined by local appraisal. IAW CG HSC Bulletin 1-77

\*\*Does not include requirements for Medical Records, X-ray, Pharmacy, or Medical Lab specialist. Requirements for these positions will be determined by local appraisal IAW criteria set forth below:

a Warrant Officer, Military Physician's Assistant, MOS 011A, may be substituted for this position.

b Requirements for X-ray, medical lab, medical records, and pharmacy will be positionally evaluated. Consideration will be given to workload, and to time required to be present at the clinic; and to medical technicians performing multiple tasks (e.g., X-ray plus lab procedures).

Note 1. When authorized, dependent medical care may be provided in a TMC facility by a Family Practice Physician or by a Flight Surgeon operating on an assigned unit support basis.

Note 2. To permit development of a more accurate yardstick, the following workload data will be included in the Schedule X: average monthly number of Troop Medical Clinic visits, average monthly number of laboratory procedures performed in the TMC; number of pharmacy products issued monthly in the TMC; number of X-ray exposures monthly in the TMC; permanent party health records maintained in the TMC; student (BCT, AIT, OUST) health records maintained in the TMC; family members treated in the TMC (average monthly).

✓ ★Table 557-52.4: General Outpatient

**Work Performed.** Examines and treats patients in the General Outpatient Clinic, giving continuity and coordination to their total health care, including referrals to other health professionals and admission to inpatient services, retaining primary responsibility for care of these patients as appropriate to the circumstances. Assesses, provides and evaluates care of patients with a health care problem including history and physical, assessment and treatment of common minor illnesses; maintenance care of patients with chronic diseases, and health counseling and teaching. Conducts staff education and patient centered conferences.

Yardstick	Clinic visits (thousands)* .....				3.0	3.9	6.65	9.0
	Manpower requirement ** .....				11	13	19	24
	Interval rate .....				2.22	2.18	2.13	

Military Positions					Position Delineation	Number of Positions				Civilian Positions	
Line	Duty Position Title	BR	Code MOS	Grade						Job title	Code
1	INTERNIST <i>a</i>	MC	61F	MAJ	C	..	..	..	1	MED OFF (INTERNAL MED)	GS-0602
										MED OFF (FAMILY PRAC)	GS-0602
2	INTERNIST <i>a</i>	MC	61F	CPT	C	1	1	1	1	MED OFF (INTERNAL MED)	GS-0602
										MED OFF (FAMILY PRAC)	GS-0602
3	GEN MED OFF	MC	60E	CPT	C	3	4	7	9	MED OFF (GENERAL PRAC)	GS-0602
										MED OFF (FAMILY PRAC)	GS-0602
4	CLINICAL HEAD NURSE	AN	66H	MAJ/CPT	C	1	1	1	1	SUPV CLINICAL NURSE	GS-0610
										CLINICAL NURSE	GS-0610
5	NURSE PRACTITIONER	AN	66Hc	CPT/bLT	C	..	..	..	..	CLINICAL NURSE	GS-0610
6	CLINICAL STAFF NURSE	AN	66H	CPT/LT	C	..	1	2	2	CLINICAL NURSE	GS-0610
7	DISPENSARY SP	..	91B20	E5	C	1	1	1	2	NURSING ASSISTANT	GS-0621
8	DISPENSARY SP	..	91B10	E4	C	2	2	3	3	NURSING ASSISTANT	GS-0621
9	DISPENSARY SP	..	91B10	E3	C	2	2	3	4	NURSING ASSISTANT	GS-0621
10	CLERK TYPIST	..	71L10	E3	C	1	1	1	1	CLERK TYPIST	GS-0322

\*General Outpatient Clinic visits during the calendar month as reported on the Medical Summary Report, MED 302.

\*\* (1) Where the family practice concept is practiced, additional personnel requirements will be determined by local appraisal.

(2) Does not include nurse practitioner requirements. Nurse practitioner requirements will be determined by local appraisal in accordance with paragraph 1-2c, chapter 1. Position was previously designated nurse clinician.

a These positions should be filled with Family Physicians, SSI 61H, as they become available.

b Deviation from grades indicated may be required in accordance with criteria set forth in paragraph 1-2c, chapter 1.

c ASI 8E should be used for assignments to this position in conjunction with SSI 66H.

Note. Where clinic operates other than 40 hours a week or is combined with another clinic, manpower requirements will be determined by local appraisal.

Appendix H  
Implementation Plan

Action

1. Brief affected personnel concerning results of the study.
2. Assign responsibilities for implementing the recommended solution.
  - a. Chief, Department of Primary Care and Community Medicine:
    - (1) Establish a new GOC physician schedule to provide a physician in the ICC, 1500–2300, daily and modify the GOC operating hours to close at 2300, daily.
    - (2) Reserve 12 morning same day appointments and 50 percent of evening shift appointments for ER patients.
    - (3) Implement a system to account for ICC workload.
    - (4) Ensure a triage category is assigned to each ER patient.
    - (5) Begin collecting data to complete an interim schedule X.
    - (6) Provide input to the hospital Marketing Committee.
  - b. Chief, Department of Emergency Medicine:
    - (1) Designate an area in the ER for the ICC.
    - (2) Train GOC physicians in triage techniques.
    - (3) Provide supplies and equipment for operation of the ICC.
    - (4) Continue to collect data on the number of critical care admissions.
    - (5) Provide input to the Marketing Committee.
  - c. Chief, Resource Management Division:

(1) Designate an accounting classification code for the ICC work center to document consumption of resources and account for workload.

(2) Provide assistance to the Chief, DPCCM in completion of the interim Schedule X.

d. Chief, Clinical Support Division:

(1) Design and administer a patient satisfaction survey 6 months after opening of the ICC.

(2) Analyze survey data and make recommendations.

(3) Obtain immediate feedback from patients using the GOC and the ER, using the services of the Patient Representative Officer.

(4) Provide input to the hospital Marketing Committee.

e. Chief, Logistics Division:

(1) Design and make signage for the ICC.

(2) Prepare a justification for a construction project to expand the waiting area of the ER.

f. Chief, Pharmacy Service; Chief, Department of Radiology; and Chief, Department of Pathology: Arrange staffing to provide support to the GOC until 2300, daily.

g. Chief, Department of Nursing:

(1) Assign ancillary staff to assist the GOC physicians in the ICC.

(2) Report daily ICC workload at the morning Executive Committee meeting.

h. Public Affairs Officer:

(1) Prepare public announcements for local newspapers.

(2) Prepare a patient handout concerning the ICC.

- (3) Provide input to the Marketing Committee.
- 3. All action officers will submit a written progress report to the Commander after 6 months of operation of the ICC.